SEQUENCE LISTING

<110> Eric Potter Clarkson

<120> Methods and compositions for desensitisation

<130> 5538/1010

<140> US 09/610,134
<141> 2000-07-05

<150> PCT/GB99/00080
<151> 1999-01-11

<150> GB/9800445.0
<151> 1998-01-09

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<151> 1998-09-21

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<170> PatentIn version 3.0

<210> 1
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1 5 10 15

Tyr

<210> 2
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<400> 2

Phe Gln Val Ala Gln Tyr Lys Ala Leu Pro Val Val Leu Glu Asn Ala
1 5 10 15

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<400> 3

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<211> 70
<212> PRT
<213> Felis catus

<400> 4

Glu Ile Cys Pro Ala Val Lys Asp Arg Val Asp Leu Phe Leu Thr Gly
1 5 10 15

Thr Pro Asp Glu Tyr Val Glu Gln Val Ala Gln Tyr Lys Ala Leu Pro
20 25 30

Val Val Leu Glu Asn Ala Arg Ile Leu Lys Asn Cys Val Asp Ala Lys
35 40 45

Met Thr Glu Glu Asp Lys Glu Asn Ala Leu Ser Leu Leu Asp Lys Ile
50 55 60

Tyr Thr Ser Pro Leu Cys
65 70

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<211> 92
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<213> Felis catus

<400> 5

Val Lys Met Ala Glu Thr Cys Pro Ile Phe Tyr Asp Val Phe Phe Ala
1 5 10 15

Val Ala Asn Gly Asn Glu Leu Leu Leu Lys Leu Ser Leu Thr Lys Val
20 25 30

Asn Ala Thr Glu Pro Glu Arg Thr Ala Met Lys Lys Ile Gln Asp Cys
35 40 45

Tyr Val Glu Asn Gly Leu Ile Ser Arg Val Leu Asp Gly Leu Val Met
50 55 60

Thr Thr Ile Ser Ser Ser Lys Asp Cys Met Gly Glu Ala Val Gln Asn
65 70 75 80

Thr Val Glu Asp Leu Lys Leu Asn Thr Leu Gly Arg
85 90

<210> 6
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<400> 6

Glu Ile Cys Pro Ala [illegible]

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<400> 7

Arg Ile Leu Lys Asn Cys Val Asp Ala Lys Met Thr Glu Glu Asp Lys
1 5 10 15

Glu

<210> 8
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<400> 8

Lys Met Thr Glu Glu Asp Lys Glu Asn Ala Leu Ser Leu Leu Asp Lys
1 5 10 15

<210> 9
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<213> Felis catus

<400> 9

Lys Glu Asn Ala Leu Ser Val Leu Asp Lys Ile Tyr Thr Ser Pro Leu
1 5 10 15

<210> 10
<211> 16
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<213> Felis catus

<400> 10

Val Lys Met Ala Glu Thr Cys Pro Ile Phe Tyr Asp Val Phe Phe Ala
1 5 10 15

<210> 11
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<213> Felis catus

<400> 11

Cys Pro Ile Phe Tyr Asp Val Phe Phe Ala Val Ala Asn Gly Asn Glu
1 5 10 15

Leu

<400> 12

Gly Asn Glu Leu Leu Leu Lys Leu Ser Leu Thr Lys Val Asn Ala Thr
1 5 10 15

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<400> 13

Leu Thr Lys Val Asn Ala Thr Glu Pro Glu Arg Thr Ala Met Lys Lys
1 5 10 15

<210> 14
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<400> 14

Thr Ala Met Lys Lys Ile Gln Asp Cys Tyr Val Glu Asn Gly Leu Ile
1 5 10 15

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<213> Felis catus

<400> 15

Cys Tyr Val Glu Asn Gly Leu Ile Ser Arg Val Leu Asp Gly Leu Val
1 5 10 15

<210> 16
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<213> Felis catus

<400> 16

Ser Arg Val Leu Asp Gly Leu Val Met Thr Thr Ile Ser Ser Ser Lys
1 5 10 15

<210> 17
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<213> Felis catus

<400> 17

Ile Ser Ser Ser Lys Asp Cys Met Gly Glu Ala Val Gln Asn Thr Val
1 5 10 15

<210> 18
<211>

Ala Val Gln Asn Thr Val Glu Asp Leu Lys Leu Thr Thr

1 5 10 15

<210> 19
<211> 320
<212> PRT
<213> Dermatophagoides pteronyssinus

<400> 19

Met Lys Ile Val Leu Ala Ile Ala Ser Leu Leu Ala Leu Ser Ala Val
1 5 10 15

Tyr Ala Arg Pro Ser Ser Ile Lys Thr Phe Glu Glu Tyr Lys Lys Ala
20 25 30

Phe Asn Lys Ser Tyr Ala Thr Phe Glu Asp Glu Glu Ala Ala Arg Lys
35 40 45

Asn Phe Leu Glu Ser Val Lys Tyr Val Gln Ser Asn Gly Gly Ala Ile
50 55 60

Asn His Leu Ser Asp Leu Ser Leu Asp Glu Phe Lys Asn Arg Phe Leu
65 70 75 80

Met Ser Ala Glu Ala Phe Glu His Leu Lys Thr Gln Phe Asp Leu Asn
85 90 95

Ala Glu Thr Asn Ala Cys Ser Ile Asn Gly Asn Ala Pro Ala Glu Ile
100 105 110

Asp Leu Arg Gln Met Arg Thr Val Thr Pro Ile Arg Met Gln Gly Gly
115 120 125

Cys Gly Ser Cys Trp Ala Phe Ser Gly Val Ala Ala Thr Glu Ser Ala
130 135 140

Tyr Leu Ala Tyr Arg Asn Gln Ser Leu Asp Leu Ala Glu Gln Glu Leu
145 150 155 160

Val Asp Cys Ala Ser Gln His Gly Cys His Gly Asp Thr Ile Pro Arg
165 170 175

Gly Ile Glu Tyr Ile Gln His Asn Gly Val Val Gln Glu Ser Tyr Tyr
180 185 190

Arg Tyr Val Ala Arg Glu Gln Ser Cys Arg Arg Pro Asn Ala Gln Arg
195 200 205

Phe Gly Ile Ser Asn Tyr Cys Gln Ile Tyr Pro Pro Asn Val Asn Lys
210 215 220

Ile Arg Glu Ala Leu Ala Gln Thr His Ser Ala Ile Ala Val Ile Ile
225 230 235

[illegible]

[illegible] Val Asn Ile
[illegible] 270

Val Gly Tyr Ser Asn Ala Gln Gly Val Asn [illegible]

275 280 285

Ser Trp Asp Thr Asn Trp Gly Asp Asn Gly Tyr Gly Tyr Phe Ala Ala
290 295 300

Asn Ile Asp Leu Met Met Ile Glu Glu Tyr Pro Tyr Val Val Ile Leu
305 310 315 320

<210> 20
<211> 146
<212> PRT
<213> Dermatophagoides pteronyssinus

<400> 20

Met Met Tyr Lys Ile Leu Cys Leu Ser Leu Leu Val Ala Ala Val Ala
1 5 10 15

Arg Asp Gln Val Asp Val Lys Asp Cys Ala Asn His Glu Ile Lys Lys
20 25 30

Val Leu Val Pro Gly Cys His Gly Ser Glu Pro Cys Ile Ile His Arg
35 40 45

Gly Lys Pro Phe Gln Leu Glu Ala Val Phe Glu Ala Asn Gln Asn Thr
50 55 60

Lys Thr Ala Lys Ile Glu Ile Lys Ala Ser Ile Asp Gly Leu Glu Val
65 70 75 80

Asp Val Pro Gly Ile Asp Pro Asn Ala Cys His Tyr Met Lys Cys Pro
85 90 95

Leu Val Lys Gly Gln Gln Tyr Asp Ile Lys Tyr Thr Trp Asn Val Pro
100 105 110

Lys Ile Ala Pro Lys Ser Glu Asn Val Val Val Thr Val Lys Val Met
115 120 125

Gly Asp Asp Gly Val Leu Ala Cys Ala Ile Ala Thr His Ala Lys Ile
130 135 140

Arg Asp
145

<210> 21
<211> 261
<212> PRT
<213> Dermatophagoides pteronyssinus

<400> 21

Met Ile Ile Tyr Asn Ile Leu Ile Val Leu Leu Leu [illegible]
1 5

[illegible] Cys Pro Tyr Gln Ile Ser Leu Gln
[illegible] 45

Ser Ser Ser His Phe Cys Gly Gly Thr Ile Leu Asp Glu Tyr Trp Ile
50 55 60

Leu Thr Ala Ala His Cys Val Ala Gly Gln Thr Ala Ser Lys Leu Ser
65 70 75 80

Ile Arg Tyr Asn Ser Leu Lys His Ser Leu Gly Gly Glu Lys Ile Ser
85 90 95

Val Ala Lys Ile Phe Ala His Glu Lys Tyr Asp Ser Tyr Gln Ile Asp
100 105 110

Asn Asp Ile Ala Leu Ile Lys Leu Lys Ser Pro Met Lys Leu Asn Gln
115 120 125

Lys Asn Ala Lys Ala Val Gly Leu Pro Ala Lys Gly Ser Asp Val Lys
130 135 140

Val Gly Asp Gln Val Arg Val Ser Gly Trp Gly Tyr Leu Glu Glu Gly
145 150 155 160

Ser Tyr Ser Leu Pro Ser Glu Leu Arg Arg Val Asp Ile Ala Val Val
165 170 175

Ser Arg Lys Glu Cys Asn Glu Leu Tyr Ser Lys Ala Asn Ala Glu Val
180 185 190

Thr Asp Asn Met Ile Cys Gly Gly Asp Val Ala Asn Gly Gly Lys Asp
195 200 205

Ser Cys Gln Gly Asp Ser Gly Gly Pro Val Val Asp Val Lys Asn Asn
210 215 220

Gln Val Val Gly Ile Val Ser Trp Gly Tyr Gly Cys Ala Arg Lys Gly
225 230 235 240

Tyr Pro Gly Val Tyr Thr Arg Val Gly Asn Phe Ile Asp Trp Ile Glu
245 250 255

Ser Lys Arg Ser Gln
260

<210> 22
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<213> Dermatophagoides pteronyssinus

<220>
<221> misc_feature
<223> X is an unknown amino acid

<400> 22

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<210> 23

<211> 132
<212> PRT
<213> Dermatophagoides pteronyssinus

<400> 73

Met Lys Phe Ile Ile Ala Phe Phe Val Ala Thr Leu Ala Val Met Thr
1 5 10 15

Val Ser Gly Glu Asp Lys Lys His Asp Tyr Gln Asn Glu Phe Asp Phe
20 25 30

Leu Leu Met Glu Arg Ile His Glu Gln Ile Lys Lys Gly Glu Leu Ala
35 40 45

Leu Phe Tyr Leu Gln Glu Gln Ile Asn His Phe Glu Glu Lys Pro Thr
50 55 60

Lys Glu Met Lys Asp Lys Ile Val Ala Glu Met Asp Thr Ile Ile Ala
65 70 75 80

Met Ile Asp Gly Val Arg Gly Val Leu Asp Arg Leu Met Gln Arg Lys
85 90 95

Asp Leu Asp Ile Phe Glu Gln Tyr Asn Leu Glu Met Ala Lys Lys Ser
100 105 110

Gly Asp Ile Leu Glu Arg Asp Leu Lys Lys Glu Glu Ala Arg Val Lys
115 120 125

Lys Ile Glu Val
130

<210> 74
<211> 20
<212> PRT
<213> Dermatophagoides pteronyssinus

<220>
<221> misc_feature
<223> Xaa is unknown amino acid

<400> 74

Ala Ile Gly Xaa Gln Pro Ala Ala Xaa Ala Glu Ala Pro Phe Gln Ile
1 5 10 15

Ser Leu Met Lys
20

<210> 75
<211> 215
<212> PRT

Met Met Lys Leu Leu Leu Leu Ile Ala Ala Ala Ala Phe Val Ala Val Ser
1 5 10 15

Ala Asp Pro Ile His Tyr Asp Lys Ile Thr Glu Glu Ile Asn Lys Ala
20 25 30

Val Asp Glu Ala Val Ala Ala Ile Glu Lys Ser Glu Thr Phe Asp Pro
35 40 45

Met Lys Val Pro Asp His Ser Asp Lys Phe Glu Arg His Ile Gly Ile
50 55 60

Ile Asp Leu Lys Gly Glu Leu Asp Met Arg Asn Ile Gln Val Arg Gly
65 70 75 80

Leu Lys Gln Met Lys Arg Val Gly Asp Ala Asn Val Lys Ser Glu Asp
85 90 95

Gly Val Val Lys Ala His Leu Leu Val Gly Val His Asp Asp Val Val
100 105 110

Ser Met Glu Tyr Asp Leu Ala Tyr Lys Leu Gly Asp Leu His Pro Asn
115 120 125

Thr His Val Ile Ser Asp Ile Gln Asp Phe Val Val Glu Leu Ser Leu
130 135 140

Glu Val Ser Glu Glu Gly Asn Met Thr Leu Thr Ser Phe Glu Val Arg
145 150 155 160

Gln Phe Ala Asn Val Val Asn His Ile Gly Gly Leu Ser Ile Leu Asp
165 170 175

Pro Ile Phe Ala Val Leu Ser Asp Val Leu Thr Ala Ile Phe Gln Asp
180 185 190

Thr Val Arg Ala Glu Met Thr Lys Val Leu Ala Pro Ala Phe Lys Lys
195 200 205

Glu Leu Glu Arg Asn Asn Gln
210 215

<210> 26
<211> 18
<212> PRT
<213> Dermatophagoides pteronyssinus

<400> 26

Leu Val Gly Gly Ser Asn Ala Ser Pro Gly Asp Ala Val Tyr Gln Ile
1 5 10 15

Ala Leu

<210> 27
<211> 21

Met Lys Phe Val Leu Ala Ile Ala Ser Leu Leu Val Leu Thr Val Thr
1 5

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Ala Arg Pro Ala Ser Ile Lys Thr Phe Glu Phe Lys Lys Ala Phe Asn
            20                  25                  30

Lys Asn Tyr Ala Thr Val Glu Glu Glu Glu Val Ala Arg Lys Asn Phe
        35                  40                  45

Leu Glu Ser Leu Lys Tyr Val Glu Ala Asn Lys Gly Ala Ile Asn His
    50                  55                  60

Leu Ser Asp Leu Ser Leu Asp Glu Phe Lys Asn Arg Tyr Leu Met Ser
65                  70                  75                  80

Ala Glu Ala Phe Glu Gln Leu Lys Thr Gln Phe Asp Leu Asn Ala Glu
                85                  90                  95

Thr Ser Ala Cys Arg Ile Asn Ser Val Asn Val Pro Ser Glu Leu Asp
            100                 105                 110

Leu Arg Ser Leu Arg Thr Val Thr Pro Ile Arg Met Gln Gly Gly Cys
        115                 120                 125

Gly Ser Cys Trp Ala Phe Ser Gly Val Ala Ala Thr Glu Ser Ala Tyr
    130                 135                 140

Leu Ala Tyr Arg Asn Thr Ser Leu Asp Leu Ser Glu Gln Glu Leu Val
145                 150                 155                 160

Asp Cys Ala Ser Gln His Gly Cys His Gly Asp Thr Ile Pro Arg Gly
                165                 170                 175

Ile Glu Tyr Ile Gln Gln Asn Gly Val Val Glu Glu Arg Ser Tyr Pro
            180                 185                 190

Tyr Val Ala Arg Glu Gln Arg Cys Arg Arg Pro Asn Ser Gln His Tyr
        195                 200                 205

Gly Ile Ser Asn Tyr Cys Gln Ile Tyr Pro Pro Asp Val Lys Gln Ile
    210                 215                 220

Arg Glu Ala Leu Thr Gln Thr His Thr Ala Ile Ala Val Ile Ile Gly
225                 230                 235                 240

Ile Lys Asp Leu Arg Ala Phe Gln His Tyr Asp Gly Arg Thr Ile Ile
                245                 250                 255

Gln His Asp Asn Gly Tyr Gln Pro Asn Tyr His Ala Val Asn Ile Val
            260                 265                 270

Gly Tyr Gly Ser Thr Gln Gly Asp Asp Tyr Trp Ile Val Arg Asn Ser
        275                 280                 285

Trp Asp Thr Thr Trp Gly Asp Ser Gly Tyr [illegible]
    290
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<211> [illegible]
<212> PRT

<213> Dermatophagoides farinae

<400> 28

Met Ile Ser Lys Ile Leu Cys Leu Ser Leu Leu Val Ala Ala Val Val
1 5 10 15

Ala Asp Gln Val Asp Val Lys Asp Cys Ala Asn Asn Glu Ile Lys Lys
20 25 30

Val Met Val Asp Gly Cys His Gly Ser Asp Pro Cys Ile Ile His Arg
35 40 45

Gly Lys Pro Phe Thr Leu Glu Ala Leu Phe Asp Ala Asn Gln Asn Thr
50 55 60

Lys Thr Ala Lys Ile Glu Ile Lys Ala Ser Leu Asp Gly Leu Glu Ile
65 70 75 80

Asp Val Pro Gly Ile Asp Thr Asn Ala Cys His Phe Met Lys Cys Pro
85 90 95

Leu Val Lys Gly Gln Gln Tyr Asp Ile Lys Tyr Thr Trp Asn Val Pro
100 105 110

Lys Ile Ala Pro Lys Ser Glu Asn Val Val Val Thr Val Lys Leu Ile
115 120 125

Gly Asp Asn Gly Val Leu Ala Cys Ala Ile Ala Thr His Gly Lys Ile
130 135 140

Arg Asp
145

<210> 29
<211> 259
<212> PRT
<213> Dermatophagoides farinae

<400> 29

Met Met Ile Leu Thr Ile Val Val Leu Leu Ala Ala Asn Ile Leu Ala
1 5 10 15

Thr Pro Ile Leu Pro Ser Ser Pro Asn Ala Thr Ile Val Gly Gly Val
20 25 30

Lys Ala Gln Ala Gly Asp Cys Pro Tyr Gln Ile Ser Leu Gln Ser Ser
35 40 45

Ser His Phe Cys Gly Gly Ser Ile Leu Asp Glu Tyr Trp Ile Leu Thr
50 55 60

Ala Ala His Cys

Gln Ile Tyr Gln His Glu Asn Tyr Asp Ser Met Thr Ile Asp Asn Asp
100

Val Ala Leu Ile Lys Leu Lys Thr Pro Met Thr Leu Asp Gln Thr Asn
115 120 125

Ala Lys Pro Val Pro Leu Pro Ala Gln Gly Ser Asp Val Lys Val Gly
130 135 140

Asp Lys Ile Arg Val Ser Gly Trp Gly Tyr Leu Gln Glu Gly Ser Tyr
145 150 155 160

Ser Leu Pro Ser Glu Leu Gln Arg Val Asp Ile Asp Val Val Ser Arg
165 170 175

Glu Gln Cys Asp Gln Leu Tyr Ser Lys Ala Gly Ala Asp Val Ser Glu
180 185 190

Asn Met Ile Cys Gly Gly Asp Val Ala Asn Gly Gly Val Asp Ser Cys
195 200 205

Gln Gly Asp Ser Gly Gly Pro Val Val Asp Val Ala Thr Lys Gln Ile
210 215 220

Val Gly Ile Val Ser Trp Gly Tyr Gly Cys Ala Arg Lys Gly Tyr Pro
225 230 235 240

Gly Val Tyr Thr Arg Val Gly Asn Phe Val Asp Trp Ile Glu Ser Lys
245 250 255

Arg Ser Gln

<210> 30
<211> 20
<212> PRT
<213> Dermatophagoides farinae

<400> 30

Ala Val Gly Gly Gln Asp Ala Asp Leu Ala Glu Ala Pro Phe Gln Ile
1 5 10 15

Ser Leu Leu Lys
20

<210> 31
<211> 213
<212> PRT
<213> Dermatophagoides farinae

<400> 31

Met Met Lys Phe Leu Leu Ile Ala Ala Val Ala Phe Val Ala Val Ser
1 5 10

[illegible]
40 45

Met Lys Val Pro Asp His Ala Asn [illegible]

50 55 60

Val Asp Phe Lys Gly Glu Leu Ala Met Arg Asn Ile Glu Ala Arg Gly
65 70 75 80

Leu Lys Gln Met Lys Arg Gln Gly Asp Ala Asn Val Lys Gly Glu Glu
85 90 95

Gly Ile Val Lys Ala His Leu Leu Ile Gly Val His Asp Asp Ile Val
100 105 110

Ser Met Glu Tyr Asp Leu Ala Tyr Lys Leu Gly Asp Leu His Pro Thr
115 120 125

Thr His Val Ile Ser Asp Ile Gln Asp Phe Val Val Ala Leu Ser Leu
130 135 140

Glu Ile Ser Asp Glu Gly Asn Ile Thr Met Thr Ser Phe Glu Val Arg
145 150 155 160

Gln Phe Ala Asn Val Val Asn His Ile Gly Gly Leu Ser Ile Leu Asp
165 170 175

Pro Ile Phe Gly Val Leu Ser Asp Val Leu Thr Ala Ile Phe Gln Asp
180 185 190

Thr Val Arg Lys Glu Met Thr Lys Val Leu Ala Pro Ala Phe Lys Arg
195 200 205

Glu Leu Glu Lys Asn
210

<210> 32
<211> 199
<212> PRT
<213> Felis catus

<400> 32

Met Arg Gly Ala Leu Leu Val Leu Ala Leu Leu Val Thr Gln Ala Leu
1 5 10 15

Gly Val Lys Met Ala Glu Thr Cys Pro Ile Phe Tyr Asp Val Phe Phe
20 25 30

Ala Val Ala Asn Gly Asn Glu Leu Leu Leu Asp Leu Ser Leu Thr Lys
35 40 45

Val Asn Ala Thr Glu Pro Glu Arg Thr Ala Met Lys Lys Ile Gln Asp
50 55 60

Cys Tyr Val Glu Asn Gly Leu Ile Ser Arg Val Leu Asp Gly Leu Val
65 70 75

<210> 33

<211> 88
<212> PRT
<213> Felis catus

<400> 33

Met Leu Asp Ala Ala Leu Pro Pro Cys Pro Thr Val Ala Ala Thr Ala
1 5 10 15

Asp Cys Glu Ile Cys Pro Ala Val Lys Arg Asp Val Asp Leu Phe Leu
20 25 30

Thr Gly Thr Pro Asp Glu Tyr Val Glu Gln Val Ala Gln Tyr Lys Ala
35 40 45

Leu Pro Val Val Leu Glu Asn Ala Arg Ile Leu Lys Asn Cys Val Asp
50 55 60

Ala Lys Met Thr Glu Glu Asp Lys Glu Asn Ala Leu Ser Leu Leu Asp
65 70 75 80

Lys Ile Tyr Thr Ser Pro Leu Cys
85

<210> 34
<211> 92
<212> PRT
<213> Felis catus

<400> 34

Met Lys Gly Ala Arg Val Leu Val Leu Leu Trp Ala Ala Leu Leu Leu
1 5 10 15

Ile Trp Gly Gly Asn Cys Glu Ile Cys Pro Ala Val Lys Arg Asp Val
20 25 30

Asp Leu Phe Leu Thr Gly Thr Pro Asp Glu Tyr Val Glu Gln Val Ala
35 40 45

Gln Tyr Lys Ala Leu Pro Val Val Leu Glu Asn Ala Arg Ile Leu Lys
50 55 60

Asn Cys Val Asp Ala Lys Met Thr Glu Glu Asp Lys Glu Asn Ala Leu
65 70 75 80

Ser Leu Leu Asp Lys Ile Tyr Thr Ser Pro Leu Cys
85 90

<210> 35
<211> 138
<212> PRT
<213> Hevea brasiliensis

[illegible]

[illegible]

Ser Asn Val Tyr Leu Phe Ala Lys Asp Lys Ser Gly Pro Leu Gln Pro
35 40 45

Gly Val Asp Ile Ile Glu Gly Pro Val Lys Asn Val Ala Val Pro Leu
50 55 60

Tyr Asn Arg Phe Ser Tyr Ile Pro Asn Gly Ala Leu Lys Phe Val Asp
65 70 75 80

Ser Thr Val Val Ala Ser Val Thr Ile Ile Asp Arg Ser Leu Pro Pro
85 90 95

Ile Val Lys Asp Ala Ser Ile Gln Val Val Ser Ala Ile Arg Ala Ala
100 105 110

Pro Glu Ala Ala Arg Ser Leu Ala Ser Ser Leu Pro Gly Gln Thr Lys
115 120 125

Ile Leu Ala Lys Val Phe Tyr Gly Glu Asn
130 135

<210> 36
<211> 204
<212> PRT
<213> Hevea brasiliensis

<400> 36

Met Ala Glu Glu Val Glu Glu Glu Arg Leu Lys Tyr Leu Asp Phe Val
1 5 10 15

Arg Ala Ala Gly Val Tyr Ala Val Asp Ser Phe Ser Thr Leu Tyr Leu
20 25 30

Tyr Ala Lys Asp Ile Ser Gly Pro Leu Lys Pro Gly Val Asp Thr Ile
35 40 45

Glu Asn Val Val Lys Thr Val Val Thr Pro Val Tyr Tyr Ile Pro Leu
50 55 60

Glu Ala Val Lys Phe Val Asp Lys Thr Val Asp Val Ser Val Thr Ser
65 70 75 80

Leu Asp Gly Val Val Pro Pro Val Ile Lys Gln Val Ser Ala Gln Thr
85 90 95

Tyr Ser Val Ala Gln Asp Ala Pro Arg Ile Val Leu Asp Val Ala Ser
100 105 110

Ser Val Phe Asn Thr Gly Val Gln Glu Gly Ala Lys Ala Leu Tyr Ala
115 120 125

Asn Leu Gln

Thr Ala Val Tyr Phe Ser Glu Lys Tyr Asn Asp Val Val Arg Glu Thr
165

```
Thr Glu Gln Gly Tyr Arg Val Ser Ser Tyr Leu Pro Leu Leu Pro Thr
            180                 185                 190

Glu Lys Ile Thr Lys Val Phe Gly Asp Glu Ala Ser
        195                 200

<210>  37
<211>  263
<212>  PRT
<213>  Lolium perenne

<400>  37

Met Ala Ser Ser Ser Ser Val Leu Leu Val Val Ala Leu Phe Ala Val
1               5                   10                  15

Phe Leu Gly Ser Ala His Gly Ile Ala Lys Val Pro Pro Gly Pro Asn
            20                  25                  30

Ile Thr Ala Glu Tyr Gly Asp Lys Trp Leu Asp Ala Lys Ser Thr Trp
        35                  40                  45

Tyr Gly Lys Pro Thr Gly Ala Gly Pro Lys Asp Asn Gly Gly Ala Cys
    50                  55                  60

Gly Tyr Lys Asn Val Asp Lys Ala Pro Phe Asn Gly Met Thr Gly Cys
65                  70                  75                  80

Gly Asn Thr Pro Ile Phe Lys Asp Gly Arg Gly Cys Gly Ser Cys Phe
                85                  90                  95

Glu Ile Lys Cys Thr Lys Pro Glu Ser Cys Ser Gly Glu Ala Val Thr
            100                 105                 110

Val Thr Ile Thr Asp Asp Asn Glu Glu Pro Ile Ala Pro Tyr His Phe
        115                 120                 125

Asp Leu Ser Gly His Ala Phe Gly Ser Met Ala Lys Lys Gly Glu Glu
    130                 135                 140

Gln Asn Val Arg Ser Ala Gly Glu Leu Glu Leu Gln Phe Arg Arg Val
145                 150                 155                 160

Lys Cys Lys Tyr Pro Asp Asp Thr Lys Pro Thr Phe His Val Glu Lys
                165                 170                 175

Ala Ser Asn Pro Asn Tyr Leu Ala Ile Leu Val Lys Tyr Val Asp Gly
            180                 185                 190

Asp Gly Asp Val Val Ala Val Asp Ile Lys Glu Lys Gly Lys Asp Lys
        195                 200                 205

Trp Ile [illegible]

[illegible]

Gly Thr Lys Ser Glu Phe Glu Asp Val Ile Pro Glu Gly Trp Lys Ala
                245                 [illegible]
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Asp Thr Ser Tyr Ser Ala Lys
260

<210> 38
<211> 97
<212> PRT
<213> Lolium perenne

<400> 38

Ala Ala Pro Val Glu Phe Thr Val Glu Lys Gly Ser Asp Glu Lys Asn
1 5 10 15

Leu Ala Leu Ser Ile Lys Tyr Asn Lys Glu Gly Asp Ser Met Ala Glu
20 25 30

Val Glu Leu Lys Glu His Gly Ser Asn Glu Trp Leu Ala Leu Lys Lys
35 40 45

Asn Gly Asp Gly Val Trp Glu Ile Lys Ser Asp Lys Pro Leu Lys Gly
50 55 60

Pro Phe Asn Phe Arg Phe Val Ser Glu Lys Gly Met Arg Asn Val Phe
65 70 75 80

Asp Asp Val Val Pro Ala Asp Phe Lys Val Gly Thr Thr Tyr Lys Pro
85 90 95

Glu

<210> 39
<211> 97
<212> PRT
<213> Lolium perenne

<400> 39

Thr Lys Val Asp Leu Thr Val Glu Lys Gly Ser Asp Ala Lys Thr Leu
1 5 10 15

Val Leu Asn Ile Lys Tyr Thr Arg Pro Gly Asp Thr Leu Ala Glu Val
20 25 30

Glu Leu Arg Gln His Gly Ser Glu Glu Trp Glu Pro Met Thr Lys Lys
35 40 45

Gly Asn Leu Trp Glu Val Lys Ser Ala Lys Pro Leu Thr Gly Pro Met
50 55 60

Asn Phe Arg Phe Leu Ser Lys Gly Gly Met Lys Asn Val Phe Asp Glu
65 70

<210> 40

<211> 308
<212> PRT
<213> Lolium perenne

<400> 40

Met Ala Val Gln Lys Tyr Thr Val Ala Leu Phe Leu Arg Arg Gly Pro
1 5 10 15

Arg Gly Gly Pro Gly Arg Ser Tyr Ala Ala Asp Ala Gly Tyr Thr Pro
20 25 30

Ala Ala Ala Ala Thr Pro Ala Thr Pro Ala Ala Thr Pro Ala Gly Gly
35 40 45

Trp Arg Glu Gly Asp Asp Arg Arg Ala Glu Ala Ala Gly Gly Arg Gln
50 55 60

Arg Leu Ala Ser Arg Gln Pro Trp Pro Pro Leu Pro Thr Pro Leu Arg
65 70 75 80

Arg Thr Ser Ser Arg Ser Ser Arg Pro Pro Ser Pro Ser Pro Pro Arg
85 90 95

Ala Ser Ser Pro Thr Ser Ala Ala Lys Ala Pro Gly Leu Ile Pro Lys
100 105 110

Leu Asp Thr Ala Tyr Asp Val Ala Tyr Lys Ala Ala Glu Ala His Pro
115 120 125

Arg Gly Gln Val Arg Arg Leu Arg His Cys Pro His Arg Ser Leu Arg
130 135 140

Val Ile Ala Gly Ala Leu Glu Val His Ala Val Lys Pro Ala Thr Glu
145 150 155 160

Glu Val Leu Ala Ala Lys Ile Pro Thr Gly Glu Leu Gln Ile Val Asp
165 170 175

Lys Ile Asp Ala Ala Phe Lys Ile Ala Ala Thr Ala Ala Asn Ala Ala
180 185 190

Pro Thr Asn Asp Lys Phe Thr Val Phe Glu Ser Ala Phe Asn Lys Ala
195 200 205

Leu Asn Glu Tyr Thr Gly Gly Ala Met Arg Pro Thr Ser Ser Ser Pro
210 215 220

Pro Ser Arg Pro Arg Ser Ser Arg Pro Thr Pro Pro Pro Ser Pro Ala
225 230 235 240

Ala Pro Glu Val Lys Tyr Ala Val Phe Glu Ala Ala Leu Thr Lys Ala
245

[illegible] Ala Ala Thr Ala Ala
280 285

Ala Val Leu Pro Pro Pro [illegible]

290 295 300

Leu Ile Tyr Tyr
305

<210> 41
<211> 339
<212> PRT
<213> Lolium perenne

<400> 41

Met Ala Val Gln Lys His Thr Val Ala Leu Phe Leu Ala Val Ala Leu
1 5 10 15

Val Ala Gly Pro Ala Ala Ser Tyr Ala Ala Asp Ala Gly Tyr Ala Pro
20 25 30

Ala Thr Pro Ala Thr Pro Ala Ala Pro Ala Thr Ala Ala Thr Pro Ala
35 40 45

Thr Pro Ala Thr Pro Ala Thr Pro Ala Ala Val Pro Ser Gly Lys Ala
50 55 60

Thr Thr Glu Glu Gln Lys Leu Ile Glu Lys Ile Asn Ala Gly Phe Lys
65 70 75 80

Ala Ala Val Ala Ala Ala Ala Val Val Pro Pro Ala Asp Lys Tyr Lys
85 90 95

Thr Phe Val Glu Thr Phe Gly Thr Ala Thr Asn Lys Ala Phe Val Glu
100 105 110

Gly Leu Ala Ser Gly Tyr Ala Asp Gln Ser Lys Asn Gln Leu Thr Ser
115 120 125

Lys Leu Asp Ala Ala Leu Lys Leu Ala Tyr Glu Ala Ala Gln Gly Ala
130 135 140

Thr Pro Glu Ala Lys Tyr Asp Ala Tyr Val Ala Thr Leu Thr Glu Ala
145 150 155 160

Leu Arg Val Ile Ala Gly Thr Leu Glu Val His Ala Val Lys Pro Ala
165 170 175

Ala Glu Glu Val Lys Val Gly Ala Ile Pro Ala Ala Glu Val Gln Leu
180 185 190

Ile Asp Lys Val Asp Ala Ala Tyr Arg Thr Ala Ala Thr Ala Ala Asn
195 200 205

Ala Ala Pro Ala Asn Asp Lys Phe Thr Val Phe Glu Asn Thr Phe Asn
210 215

[illegible]
245 250 255

Ala Thr Ala Pro Glu Val [illegible]

260 265 270

Lys Ala Val Thr Ala Met Ser Glu Ala Glu Lys Glu Ala Thr Pro Ala
275 280 285

Ala Ala Ala Thr Ala Thr Pro Thr Pro Ala Ala Ala Thr Ala Thr Ala
290 295 300

Thr Pro Ala Ala Ala Tyr Ala Thr Ala Thr Pro Ala Ala Ala Thr Ala
305 310 315 320

Thr Ala Thr Pro Ala Ala Ala Thr Ala Thr Pro Ala Ala Ala Gly Gly
325 330 335

Tyr Lys Val

<210> 41
<211> 339
<212> PRT
<213> Lolium perenne

<400> 42

Met Ala Val Gln Lys His Thr Val Ala Leu Phe Leu Ala Val Ala Leu
1 5 10 15

Val Ala Gly Pro Ala Ala Ser Tyr Ala Ala Asp Ala Gly Tyr Ala Pro
20 25 30

Ala Thr Pro Ala Thr Pro Ala Ala Pro Ala Thr Ala Ala Thr Pro Ala
35 40 45

Thr Pro Ala Thr Pro Ala Thr Pro Ala Ala Val Pro Ser Gly Lys Ala
50 55 60

Thr Thr Glu Glu Gln Lys Leu Ile Glu Lys Ile Asn Ala Gly Phe Lys
65 70 75 80

Ala Ala Val Ala Ala Ala Ala Val Val Pro Pro Ala Asp Lys Tyr Lys
85 90 95

Thr Phe Val Glu Thr Phe Gly Thr Ala Thr Asn Lys Ala Phe Val Glu
100 105 110

Gly Leu Ala Ser Gly Tyr Ala Asp Gln Ser Lys Asn Gln Leu Thr Ser
115 120 125

Lys Leu Asp Ala Ala Leu Lys Leu Ala Tyr Glu Ala Ala Gln Gly Ala
130 135 140

Thr Pro Glu Ala Lys Tyr Asp Ala Tyr Val Ala Thr Leu Thr Glu Ala
145 150

[illegible]
185 190

Ile Asp Lys Val Asn Ala [illegible]

195 200 205

Ala Ala Pro Ala Asn Asp Lys Phe Thr Val Phe Glu Asn Thr Phe Asn
210 215 220

Asn Ala Ile Lys Val Ser Leu Gly Ala Ala Tyr Asp Ser Tyr Lys Phe
225 230 235 240

Ile Pro Thr Leu Val Ala Ala Val Lys Gln Ala Tyr Ala Ala Lys Gln
245 250 255

Ala Thr Ala Pro Glu Val Lys Tyr Thr Val Ser Glu Thr Ala Leu Lys
260 265 270

Lys Ala Val Thr Ala Met Ser Glu Ala Glu Lys Glu Ala Thr Pro Ala
275 280 285

Ala Ala Ala Thr Ala Thr Pro Thr Pro Ala Ala Ala Thr Ala Thr Ala
290 295 300

Thr Pro Ala Ala Ala Tyr Ala Thr Ala Thr Pro Ala Ala Ala Thr Ala
305 310 315 320

Thr Ala Thr Pro Ala Ala Ala Thr Ala Thr Pro Ala Ala Ala Gly Gly
325 330 335

Tyr Lys Val

<210> 43
<211> 134
<212> PRT
<213> Lolium perenne

<220>
<221> misc_feature
<223> X is unknown amino acid

<400> 43

Asp Lys Gly Pro Gly Phe Val Val Thr Gly Arg Val Tyr Cys Asp Pro
1 5 10 15

Tyr Arg Ala Gly Phe Glu Thr Asn Val Ser His Asn Val Glu Gly Ala
20 25 30

Thr Val Ala Val Asp Cys Arg Pro Phe Asp Gly Gly Glu Ser Lys Leu
35 40 45

Lys Ala Glu Ala Thr Thr Asp Lys Asp Gly Trp Tyr Lys Ile Glu Ile
50 55 60

Val Pro Leu Thr Ser Asn Xaa Gly Ile Lys Gln Gln Gly Ile Arg Tyr
100

Ala Asn Pro Ile Ala Phe Phe Arg Lys Gln Pro Leu Lys Glu Cys Gly
115 120 125

Gly Ile Leu Gln Ala Tyr
130

<210> 44
<211> 145
<212> PRT
<213> Olea europaea

<400> 44

Glu Asp Ile Pro Gln Pro Pro Val Ser Gln Phe His Ile Gln Gly Gln
1 5 10 15

Val Tyr Cys Asp Thr Cys Arg Ala Gly Phe Ile Thr Glu Leu Ser Glu
20 25 30

Phe Ile Pro Gly Ala Ser Leu Arg Leu Gln Cys Lys Asp Lys Glu Asn
35 40 45

Gly Asp Val Thr Phe Thr Glu Val Gly Tyr Thr Arg Ala Glu Gly Leu
50 55 60

Tyr Ser Met Leu Val Glu Arg Asp His Lys Asn Glu Phe Cys Glu Ile
65 70 75 80

Thr Leu Ile Ser Ser Gly Arg Lys Asp Cys Asn Glu Ile Pro Thr Glu
85 90 95

Gly Trp Ala Lys Pro Ser Leu Lys Phe Lys Leu Asn Thr Val Asn Gly
100 105 110

Thr Thr Arg Thr Val Asn Pro Leu Gly Phe Phe Lys Lys Glu Ala Leu
115 120 125

Pro Lys Cys Ala Gln Val Tyr Asn Lys Leu Gly Met Tyr Pro Pro Asn
130 135 140

Met
145

<210> 45
<211> 133
<212> PRT
<213> Parietaria judaica

<400> 45

Met Arg Thr Val Ser Met Ala Ala Leu Val Val Ile Ala Ala Ala Leu
1 5

[illegible]
40 45

Val Lys Gly Glu Glu [illegible]

50 55 60

Lys Lys Leu Ser Glu Glu Val Lys Thr Thr Glu Gln Lys Arg Glu Ala
65 70 75 80

Cys Lys Cys Ile Val Arg Ala Thr Lys Gly Ile Ser Gly Ile Lys Asn
85 90 95

Glu Leu Val Ala Glu Val Pro Lys Lys Cys Asp Ile Lys Thr Thr Leu
100 105 110

Pro Pro Ile Thr Ala Asp Phe Asp Cys Ser Lys Ile Gln Ser Thr Ile
115 120 125

Phe Arg Gly Tyr Tyr
130

<210> 46
<211> 133
<212> PRT
<213> Parietaria judaica

<400> 46

Met Val Arg Ala Leu Met Pro Cys Leu Pro Phe Val Gln Gly Lys Glu
1 5 10 15

Lys Glu Pro Ser Lys Gly Cys Cys Ser Gly Ala Lys Arg Leu Asp Gly
20 25 30

Glu Thr Lys Thr Gly Pro Gln Arg Val His Ala Cys Glu Cys Ile Gln
35 40 45

Thr Ala Met Lys Thr Tyr Ser Asp Ile Asp Gly Lys Leu Val Ser Glu
50 55 60

Val Pro Lys His Cys Gly Ile Val Asp Ser Lys Leu Pro Pro Ile Asp
65 70 75 80

Val Asn Met Asp Cys Lys Thr Val Gly Val Val Pro Arg Gln Pro Gln
85 90 95

Leu Pro Val Ser Leu Arg His Gly Pro Val Thr Gly Pro Ser Asp Pro
100 105 110

Ala His Lys Ala Arg Leu Glu Arg Pro Gln Ile Arg Val Pro Pro Pro
115 120 125

Ala Pro Glu Lys Ala
130

<210> 47
<211> 133

Met Arg Thr Val Ser Met Ala Ala Leu Val Val Ile Ala Ala Ala Leu
1 5 10 15

Ala Trp Thr Ser Ser Ala Glu Leu Ala Ser Ala Pro Ala Pro Gly Glu
20 25 30

Gly Pro Cys Gly Lys Val Val His His Ile Met Pro Cys Leu Lys Phe
35 40 45

Val Lys Gly Glu Glu Lys Glu Pro Ser Lys Ser Cys Cys Ser Gly Thr
50 55 60

Lys Lys Leu Ser Glu Glu Val Lys Thr Thr Glu Gln Lys Arg Glu Ala
65 70 75 80

Cys Lys Cys Ile Val Ala Ala Thr Lys Gly Ile Ser Gly Ile Lys Asn
85 90 95

Glu Leu Val Ala Glu Val Pro Lys Lys Cys Gly Ile Thr Thr Thr Leu
100 105 110

Pro Pro Ile Thr Ala Asp Phe Asp Cys Ser Lys Ile Glu Ser Thr Ile
115 120 125

Phe Arg Gly Tyr Tyr
130

<210> 48
<211> 176
<212> PRT
<213> Parietaria judaica

<400> 48

Met Arg Thr Val Ser Ala Pro Ser Ala Val Ala Leu Val Val Ile Val
1 5 10 15

Ala Ala Gly Leu Ala Trp Thr Ser Leu Ala Ser Val Ala Pro Pro Ala
20 25 30

Pro Ala Pro Gly Ser Glu Glu Thr Cys Gly Thr Val Val Arg Ala Leu
35 40 45

Met Pro Cys Leu Pro Phe Val Gln Gly Lys Glu Lys Glu Pro Ser Lys
50 55 60

Gly Cys Cys Ser Gly Ala Lys Arg Leu Arg Gly Glu Thr Lys Thr Gly
65 70 75 80

Leu Gln Arg Val His Ala Cys Glu Cys Ile Gln Thr Ala Met Lys Thr
85 90 95

Tyr Ser Asp Ile Asp Gly Lys Leu Val Ser Glu Val Pro Lys His Cys
100 105 110

Gly Ile Val Asp Ser Leu

Arg His Gly Ile Val Thr Gly Pro Ser Asp Pro Ala His Lys Ala Arg
145 150 155 160

Leu Glu Arg Pro Gln Ile Arg Val Pro Pro Pro Ala Pro Glu Lys Ala
165 170 175

<210> 49
<211> 138
<212> PRT
<213> Parietaria judaica

<400> 49

Met Arg Thr Val Ser Ala Arg Ser Ser Val Ala Leu Val Val Ile Val
1 5 10 15

Ala Ala Val Leu Val Trp Thr Ser Ser Ala Ser Val Ala Pro Ala Pro
20 25 30

Ala Pro Gly Ser Glu Glu Thr Cys Gly Thr Val Val Gly Ala Leu Met
35 40 45

Pro Cys Leu Pro Phe Val Gln Gly Lys Glu Lys Glu Pro Ser Lys Gly
50 55 60

Cys Cys Ser Gly Ala Lys Arg Leu Asp Gly Glu Thr Lys Thr Gly Pro
65 70 75 80

Gln Arg Val His Ala Cys Glu Cys Ile Gln Thr Ala Met Lys Thr Tyr
85 90 95

Ser Asp Ile Asp Gly Lys Leu Val Ser Glu Val Pro Lys His Cys Gly
100 105 110

Ile Val Asp Ser Lys Leu Pro Pro Ile Asp Val Asn Met Asp Cys Lys
115 120 125

Thr Leu Gly Val Leu His Tyr Lys Gly Asn
130 135

<210> 50
<211> 143
<212> PRT
<213> Parietaria judaica

<400> 50

Met Val Arg Ala Leu Met Pro Cys Leu Pro Phe Val Gln Gly Lys Glu
1 5 10 15

Lys Glu Pro Ser Lys Gly Cys Cys Ser Gly Ala Lys Arg Leu Asp Gly
20 25 30

Glu Thr Lys Thr Gly Pro Gln Arg Val His Ala Cys Glu Cys Ile Gln
35 40 45

[illegible]

Val Asn Met Asp Cys Lys Thr Val Gly Val Val Pro Arg Gln Pro Gly
[illegible]

Leu Pro Val Ser Leu Arg His Gly Pro Val Thr Gly Pro Ser Arg Ser
100 105 110

Arg Pro Pro Thr Lys His Gly Trp Arg Asp Pro Arg Leu Glu Phe Arg
115 120 125

Pro Pro His Arg Lys Lys Pro Asn Pro Ala Phe Ser Thr Leu Gly
130 135 140

<210> 51
<211> 263
<212> PRT
<213> Phleum pratense

<400> 51

Met Ala Ser Ser Ser Ser Val Leu Leu Val Val Val Leu Phe Ala Val
1 5 10 15

Phe Leu Gly Ser Ala Tyr Gly Ile Pro Lys Val Pro Pro Gly Pro Asn
20 25 30

Ile Thr Ala Thr Tyr Gly Asp Lys Trp Leu Asp Ala Lys Ser Thr Trp
35 40 45

Tyr Gly Lys Pro Thr Gly Ala Gly Pro Lys Asp Asn Gly Gly Ala Cys
50 55 60

Gly Tyr Lys Asp Val Asp Lys Pro Pro Phe Ser Gly Met Thr Gly Cys
65 70 75 80

Gly Asn Thr Pro Ile Phe Lys Ser Gly Arg Gly Cys Gly Ser Cys Phe
85 90 95

Glu Ile Lys Cys Thr Lys Pro Glu Ala Cys Ser Gly Glu Pro Val Val
100 105 110

Val His Ile Thr Asp Asp Asn Glu Glu Pro Ile Ala Pro Tyr His Phe
115 120 125

Asp Leu Ser Gly His Ala Phe Gly Ala Met Ala Lys Lys Gly Asp Glu
130 135 140

Gln Lys Leu Arg Ser Ala Gly Glu Leu Glu Leu Gln Phe Arg Arg Val
145 150 155 160

Lys Cys Lys Tyr Pro Glu Gly Thr Lys Val Thr Phe His Val Glu Lys
165 170 175

Gly Ser Asn Pro Asn Tyr Leu Ala Leu Leu Val Lys Tyr Val Asn Gly
180 185 190

Asp Gly Asp [illegible]

[illegible]

[illegible] Asp Lys Leu Thr Gly Pro Phe Thr Val Arg Tyr Thr Thr Glu Glu
225 230 235

Gly Thr Lys Thr Glu Ala Glu Asp Val Ile Pro Glu Gly Trp Lys Ala
245 250 255

Asp Thr Ser Tyr Glu Ser Lys
260

<210> 52
<211> 262
<212> PRT
<213> Phleum pratense

<400> 52

Met Ala Ser Ser Ser Ser Val Leu Leu Val Val Ala Leu Phe Ala Val
1 5 10 15

Phe Leu Gly Ser Ala His Gly Ile Pro Lys Val Pro Pro Gly Pro Asn
20 25 30

Ile Thr Ala Thr Tyr Gly Asp Lys Trp Leu Asp Ala Lys Ser Thr Trp
35 40 45

Tyr Gly Lys Pro Thr Ala Ala Gly Pro Lys Asp Asn Gly Gly Ala Cys
50 55 60

Gly Tyr Lys Asp Val Asp Lys Pro Pro Phe Ser Gly Met Thr Gly Cys
65 70 75 80

Gly Asn Thr Pro Ile Phe Lys Ser Gly Arg Gly Cys Gly Ser Cys Phe
85 90 95

Glu Ile Lys Cys Thr Lys Pro Glu Ala Cys Ser Gly Glu Pro Val Val
100 105 110

Val His Ile Thr Asp Asp Asn Glu Glu Pro Ile Ala Ala Tyr His Phe
115 120 125

Asp Leu Ser Gly Ile Ala Phe Gly Ser Met Ala Lys Lys Gly Asp Glu
130 135 140

Gln Lys Leu Arg Ser Ala Gly Glu Val Glu Ile Gln Phe Arg Arg Val
145 150 155 160

Lys Cys Lys Tyr Pro Glu Gly Thr Lys Val Thr Phe His Val Glu Lys
165 170 175

Gly Ser Asn Pro Asn Tyr Leu Ala Leu Leu Val Lys Phe Ser Gly Asp
180 185 190

Gly Asp Val Val Ala Val Asp Ile Lys Glu Lys Gly Lys Asp Lys Trp
195 200 205

[illegible]

[illegible] 245

Thr Lys Ala Arg Ala Lys Asp Val Ile Pro Glu Gly Trp Lys Ala Asp
245

Thr Ala Tyr Glu Ser Lys
260

<210> 53
<211> 122
<212> PRT
<213> Phleum pratense

<400> 53

Met Ser Met Ala Ser Ser Ser Ser Ser Ser Leu Leu Ala Met Ala Val
1 5 10 15

Leu Ala Ala Leu Phe Ala Gly Ala Trp Cys Val Pro Lys Val Thr Phe
20 25 30

Thr Val Glu Lys Gly Ser Asn Glu Lys His Leu Ala Val Leu Val Lys
35 40 45

Tyr Glu Gly Asp Thr Met Ala Glu Val Glu Leu Arg Glu His Gly Ser
50 55 60

Asp Glu Trp Val Ala Met Thr Lys Gly Glu Gly Gly Val Trp Thr Phe
65 70 75 80

Asp Ser Glu Glu Pro Leu Gln Gly Pro Phe Asn Phe Arg Phe Leu Thr
85 90 95

Glu Lys Gly Met Lys Asn Val Phe Asp Asp Val Val Pro Glu Lys Tyr
100 105 110

Thr Ile Gly Ala Thr Tyr Ala Pro Glu Glu
115 120

<210> 54
<211> 276
<212> PRT
<213> Phleum pratense

<400> 54

Ala Asp Leu Gly Tyr Gly Gly Pro Ala Thr Ile Ala Ala Pro Ala Gln
1 5 10 15

Ala Ala Pro Ala Gly Lys Ala Thr Thr Glu Glu Gln Lys Leu Ile Glu
20 25 30

Lys Ile Asn Asp Gly Phe Lys Ala Ala Leu Ala Ala Ala Ala Gly Val
35 40 45

Pro Pro Ala Asp Lys Tyr [illegible]

[illegible]
85 90 95

100 105 110

Tyr Asp Ala Tyr Val Ala Thr Leu Ser Glu Ala Leu Arg Ile Ile Ala
115 120 125

Gly Thr Leu Glu Val His Ala Val Lys Pro Ala Ala Glu Glu Val Lys
130 135 140

Val Ile Pro Ala Gly Glu Leu Gln Val Ile Glu Lys Val Asp Ser Ala
145 150 155 160

Phe Lys Val Ala Ala Thr Ala Ala Asn Ala Ala Pro Ala Asn Asp Lys
165 170 175

Phe Thr Val Phe Glu Ala Ala Phe Asn Asn Ala Ile Lys Ala Ser Thr
180 185 190

Gly Gly Ala Tyr Glu Ser Tyr Lys Phe Ile Pro Ala Leu Glu Ala Ala
195 200 205

Val Lys Gln Ala Tyr Ala Ala Thr Val Ala Thr Ala Pro Glu Val Lys
210 215 220

Tyr Thr Val Phe Glu Thr Ala Leu Lys Lys Ala Phe Thr Ala Met Ser
225 230 235 240

Glu Ala Gln Lys Ala Ala Lys Pro Ala Thr Glu Ala Thr Ala Thr Ala
245 250 255

Thr Ala Ala Val Gly Ala Ala Thr Gly Ala Ala Thr Ala Ala Thr Gly
260 265 270

Gly Tyr Lys Val
275

<210> 55
<211> 276
<212> PRT
<213> Phleum pratense

<400> 55

Ala Asp Leu Gly Tyr Gly Gly Pro Ala Thr Pro Ala Ala Pro Ala Glu
1 5 10 15

Ala Ala Pro Ala Gly Lys Ala Thr Thr Glu Glu Gln Lys Leu Ile Glu
20 25 30

Lys Ile Asn Asp Gly Phe Lys Ala Ala Leu Ala Ala Ala Ala Gly Val
35 40 45

Pro Pro Ala Asp Lys Tyr Lys Thr Phe Val [illegible]

Ala [illegible] Ser Ser Ser Lys Ala Ala [illegible] Thr Ser Lys Leu Asp Ala Ala
85 90 95

100 105 110

Tyr Asp Ala Tyr Val Ala Thr Leu Ser Glu Ala Leu Arg Ile Ile Ala
115 120 125

Gly Thr Leu Glu Val His Ala Val Lys Pro Ala Ala Glu Glu Val Lys
130 135 140

Val Ile Pro Ala Gly Glu Leu Gln Val Ile Glu Lys Val Asp Ser Ala
145 150 155 160

Phe Lys Val Ala Ala Thr Ala Ala Asn Ala Ala Pro Ala Asn Asp Lys
165 170 175

Phe Thr Val Phe Glu Ala Ala Phe Asn Asn Ala Ile Lys Ala Ser Thr
180 185 190

Gly Gly Ala Tyr Glu Ser Tyr Lys Phe Ile Pro Ala Leu Glu Ala Ala
195 200 205

Val Lys Gln Ala Tyr Ala Ala Thr Val Ala Thr Ala Pro Glu Val Lys
210 215 220

Tyr Thr Val Phe Glu Thr Ala Leu Lys Lys Ala Ile Thr Ala Met Ser
225 230 235 240

Glu Ala Gln Lys Ala Ala Lys Pro Ala Thr Glu Ala Thr Ala Thr Ala
245 250 255

Thr Ala Ala Val Gly Ala Ala Thr Gly Ala Ala Thr Ala Ala Thr Gly
260 265 270

Gly Tyr Lys Val
275

<210> 56
<211> 284
<212> PRT
<213> Phleum pratense

<400> 56

Ala Ala Ala Ala Val Pro Arg Arg Gly Pro Arg Gly Gly Pro Gly Arg
1 5 10 15

Ser Tyr Thr Ala Asp Ala Gly Tyr Ala Pro Ala Thr Pro Ala Ala Ala
20 25 30

Gly Ala Ala Ala Gly Lys Ala Thr Thr Glu Glu Gln Lys Leu Ile Glu
35 40 45

Asp Ile Asn Val Gly Phe Lys Ala Ala Val Ala Ala Ala Ala Gly

Ala Tyr Ala Ala Asp Ala Lys Ala Pro Gly Val Pro Lys Val Asp
85 90 95

100 105 110

Ala Lys Phe Asp Ser Phe Val Ala Ser Leu Thr Glu Ala Leu Arg Val
115 120 125

Ile Ala Gly Ala Leu Glu Val His Ala Val Lys Pro Val Thr Glu Glu
130 135 140

Pro Gly Met Ala Lys Ile Pro Ala Gly Glu Leu Gln Ile Ile Asp Lys
145 150 155 160

Ile Asp Ala Ala Phe Lys Val Ala Ala Thr Ala Ala Ala Thr Ala Pro
165 170 175

Ala Asp Asp Lys Phe Thr Val Phe Glu Ala Ala Phe Asn Lys Ala Ile
180 185 190

Lys Glu Ser Thr Gly Gly Ala Tyr Asp Thr Tyr Lys Cys Ile Pro Ser
195 200 205

Leu Glu Ala Ala Val Lys Gln Ala Tyr Ala Ala Thr Val Ala Ala Ala
210 215 220

Pro Gln Val Lys Tyr Ala Val Phe Glu Ala Ala Leu Thr Lys Ala Ile
225 230 235 240

Thr Ala Met Ser Glu Val Gln Lys Val Ser Gln Pro Ala Thr Gly Ala
245 250 255

Ala Thr Val Ala Ala Gly Ala Ala Thr Thr Ala Ala Gly Ala Ala Ser
260 265 270

Gly Ala Ala Thr Val Ala Ala Gly Gly Tyr Lys Val
275 280

<210> 57
<211> 286
<212> PRT
<213> Phleum pratense

<400> 57

Ala Asp Leu Gly Tyr Gly Pro Ala Thr Pro Ala Ala Pro Ala Ala Gly
1 10 15

Tyr Thr Pro Ala Thr Pro Ala Ala Pro Ala Gly Ala Asp Ala Ala Gly
20 25 30

Lys Ala Thr Thr Glu Glu Gln Lys Leu Ile Glu Lys Ile Asn Ala Gly
35 40 45

Phe Lys Ala Ala Leu Ala Gly Ala [illegible]

[illegible] Lys Gly Ala Ala [illegible] Lys
85 90 95

100 105 110

Thr Ala Glu Gly Ala Thr Pro Glu Ala Lys Tyr Asp Ala Tyr Val Ala
115 120 125

Thr Leu Ser Glu Ala Leu Arg Ile Ile Ala Gly Thr Leu Glu Val His
130 135 140

Ala Val Lys Pro Ala Ala Glu Glu Val Lys Val Ile Pro Ala Gly Glu
145 150 155 160

Leu Gln Val Ile Glu Lys Val Asp Ala Ala Phe Lys Val Ala Ala Thr
165 170 175

Ala Ala Asn Ala Ala Pro Ala Asn Asp Lys Phe Thr Val Phe Glu Ala
180 185 190

Ala Phe Asn Asp Glu Ile Lys Ala Ser Thr Gly Gly Ala Tyr Glu Ser
195 200 205

Tyr Lys Phe Ile Pro Ala Leu Glu Ala Ala Val Lys Gln Ala Tyr Ala
210 215 220

Ala Thr Val Ala Thr Ala Pro Glu Val Lys Tyr Thr Val Phe Glu Thr
225 230 235 240

Ala Leu Lys Lys Ala Ile Thr Ala Met Ser Glu Ala Gln Lys Ala Ala
245 250 255

Lys Pro Ala Ala Ala Ala Thr Ala Thr Ala Thr Ala Ala Val Gly Ala
260 265 270

Ala Thr Gly Ala Ala Thr Ala Ala Thr Gly Gly Tyr Lys Val
275 280 285

<210> 58
<211> 287
<212> PRT
<213> Phleum pratense

<400> 58

Met Ala Val Gln Lys Tyr Thr Val Ala Leu Phe Leu Ala Val Ala Leu
1 5 10 15

Val Ala Gly Pro Ala Ala Ser Tyr Ala Ala Asp Ala Gly Tyr Ala Pro
20 25 30

Ala Thr Pro Ala Ala Ala Gly Ala Glu Ala Gly Lys Ala Thr Thr Glu
35 40 45

Glu Gln Lys Leu Ile Glu Asn Ile [illegible]

Ala Ala Phe Thr [illegible] Lys Ala Ala Thr Ala Lys Ala Pro Gly
85 [illegible] 95

100 105 110

Val Gly Ala Thr Pro Glu Ala Lys Phe Asp Ser Phe Val Ala Ser Leu
115 120 125

Thr Glu Ala Leu Arg Val Ile Ala Gly Ala Leu Glu Val His Ala Val
130 135 140

Lys Pro Val Thr Glu Glu Pro Gly Met Ala Lys Ile Pro Ala Gly Glu
145 150 155 160

Leu Gln Ile Ile Asp Lys Ile Asp Ala Ala Phe Lys Val Ala Ala Thr
165 170 175

Ala Ala Ala Thr Ala Pro Ala Asp Thr Val Phe Glu Ala Ala Phe Asn
180 185 190

Lys Ala Ile Lys Glu Ser Thr Gly Gly Ala Tyr Asp Thr Tyr Lys Cys
195 200 205

Ile Pro Ser Leu Glu Ala Ala Val Lys Gln Ala Tyr Ala Ala Thr Val
210 215 220

Ala Ala Ala Pro Gln Val Lys Tyr Ala Val Phe Glu Ala Ala Leu Thr
225 230 235 240

Lys Ala Ile Thr Ala Met Ser Glu Val Gln Lys Val Ser Gln Pro Ala
245 250 255

Thr Gly Ala Ala Thr Val Ala Ala Gly Ala Ala Thr Thr Ala Ala Gly
260 265 270

Ala Ala Ser Gly Ala Ala Thr Val Ala Ala Gly Gly Tyr Lys Val
275 280 285

<210> 59
<211> 290
<212> PRT
<213> Phleum pratense

<400> 59

Met Ala Val Gln Lys Tyr Thr Val Ala Leu Phe Leu Ala Val Ala Leu
1 5 10 15

Val Ala Gly Pro Ala Ala Ser Tyr Ala Ala Asp Ala Gly Tyr Ala Pro
20 25 30

Ala Thr Pro Ala Ala Ala Gly Ala Glu Ala Gly Lys Ala Thr Thr Glu
35 40 45

Glu Gln Lys Leu Ile Glu Asp Ile Asn Val Glu Phe [illegible]

[illegible]

Ala Ala Ile Thr Ser Ser Ser Lys Ala Ala Thr Ala Lys Ala Pro Gly
85 90 95

100 105 110

Val Gly Ala Thr Pro Glu Ala Lys Phe Asp Ser Phe Val Ala Ser Leu
115 120 125

Thr Glu Ala Leu Arg Val Ile Ala Gly Ala Leu Glu Val His Ala Val
130 135 140

Lys Pro Val Thr Glu Asp Pro Ala Trp Pro Lys Ile Pro Ala Gly Glu
145 150 155 160

Leu Gln Ile Ile Asp Lys Ile Asp Ala Ala Phe Lys Val Ala Ala Thr
165 170 175

Ala Ala Ala Thr Ala Pro Ala Asp Asp Lys Phe Thr Val Phe Glu Ala
180 185 190

Ala Phe Asn Lys Ala Ile Lys Glu Ser Thr Gly Gly Ala Tyr Asp Thr
195 200 205

Tyr Lys Cys Ile Pro Ser Leu Glu Ala Ala Val Lys Gln Ala Tyr Ala
210 215 220

Ala Thr Val Ala Ala Ala Pro Gln Val Lys Tyr Ala Val Phe Glu Ala
225 230 235 240

Ala Leu Thr Lys Ala Ile Thr Ala Met Ser Glu Val Gln Lys Val Ser
245 250 255

Gln Pro Ala Thr Gly Ala Ala Thr Val Ala Ala Gly Ala Ala Thr Thr
260 265 270

Ala Thr Gly Ala Ala Ser Gly Ala Ala Thr Val Ala Ala Gly Gly Tyr
275 280 285

Lys Val
290

<210> 60
<211> 265
<212> PRT
<213> Phleum pratense

<400> 60

Ala Asp Ala Gly Tyr Ala Pro Ala Thr Pro Ala Ala Ala Gly Ala Glu
1 5 10 15

Ala Gly Lys Ala Thr Thr Glu Glu Gln Lys Leu Ile Glu Asp Ile Asn
20 25 30

Val Gly Phe Lys Ala Ala Val Ala Ala Ala Ala Ser Val Pro

Ala Thr Ala Lys Ala Pro Gly Leu Val Ile Lys Leu Asp Ala Ala Tyr
65 70 75 80

85 90 95

Asp Ser Phe Val Ala Ser Leu Thr Glu Ala Leu Arg Val Ile Ala Gly
100 105 110

Ala Leu Glu Val His Ala Val Lys Pro Val Thr Glu Glu Pro Gly Met
115 120 125

Ala Lys Ile Pro Ala Gly Glu Leu Gln Ile Ile Asp Lys Ile Asp Ala
130 135 140

Ala Phe Lys Val Ala Ala Thr Ala Ala Ala Thr Ala Pro Ala Asp Asp
145 150 155 160

Lys Phe Thr Val Phe Glu Ala Ala Phe Asn Lys Ala Ile Lys Glu Ser
165 170 175

Thr Gly Gly Ala Tyr Asp Thr Tyr Lys Cys Ile Pro Ser Leu Glu Ala
180 185 190

Ala Val Lys Gln Ala Tyr Ala Ala Thr Val Ala Ala Ala Pro Gln Val
195 200 205

Lys Tyr Ala Val Phe Glu Ala Ala Leu Thr Lys Ala Ile Thr Ala Met
210 215 220

Ser Glu Val Gln Lys Val Ser Gln Pro Ala Thr Gly Ala Ala Thr Val
225 230 235 240

Ala Ala Gly Ala Ala Thr Thr Ala Ala Gly Ala Ala Ser Gly Ala Ala
245 250 255

Thr Val Ala Ala Gly Gly Tyr Lys Val
260 265

<210> 61
<211> 295
<212> PRT
<213> Phleum pratense

<400> 61

Ser Val Lys Arg Ser Asn Gly Ser Ala Glu Val His Arg Gly Ala Val
1 5 10 15

Pro Arg Arg Gly Pro Arg Gly Gly Pro Gly Arg Ser Tyr Ala Ala Asp
20 25 30

Ala Gly Tyr Ala Pro Ala Thr Pro Ala Ala Ala Gly Ala Glu Ala Gly
35 40 45

Lys Ala Thr Thr Glu Glu Gln Lys [illegible]

[illegible] Lys Thr [illegible] Ala Ala [illegible] Thr Ser Ser Pro Lys Ala Ala Thr
85 90 95

100 105 110

Ala Tyr Lys Ala Ala Val Gly Ala Thr Pro Glu Ala Lys Phe Asp Ser
115 120 125

Phe Val Ala Ser Leu Thr Glu Ala Leu Arg Val Ile Ala Gly Ala Leu
130 135 140

Glu Val His Ala Val Lys Pro Val Thr Glu Glu Pro Gly Met Ala Lys
145 150 155 160

Ile Pro Ala Gly Glu Leu Gln Ile Ile Asp Lys Ile Asp Ala Ala Phe
165 170 175

Lys Val Ala Ala Thr Ala Ala Ala Thr Ala Pro Ala Asp Asp Lys Phe
180 185 190

Thr Val Phe Glu Ala Ala Phe Asn Lys Ala Ile Lys Glu Ser Thr Gly
195 200 205

Gly Ala Tyr Asp Thr Tyr Lys Cys Ile Pro Ser Leu Glu Ala Ala Val
210 215 220

Lys Gln Ala Tyr Ala Ala Thr Val Ala Ala Ala Pro Gln Val Lys Tyr
225 230 235 240

Ala Val Phe Glu Ala Ala Leu Thr Lys Ala Ile Thr Ala Met Ser Glu
245 250 255

Val Gln Lys Val Ser Gln Pro Ala Thr Gly Ala Ala Thr Val Ala Ala
260 265 270

Gly Ala Ala Thr Thr Ala Ala Gly Ala Ala Ser Gly Ala Ala Thr Val
275 280 285

Ala Ala Gly Gly Tyr Lys Val
290 295

<210> 62
<211> 312
<212> PRT
<213> Phleum pratense

<400> 62

Met Ala Val His Gln Tyr Thr Val Ala Leu Phe Leu Ala Val Ala Leu
1 5 10 15

Val Ala Gly Pro Ala Gly Ser Tyr Ala Ala Asp Leu Gly Tyr Gly Pro
20 25 30

Ala Thr Pro Ala Ala Pro Ala Ala Gly Tyr Thr [illegible]

[illegible] Lys Ile Asn Ala Gly Phe Lys Ala Ala Leu Ala Ala
65 70 75 80

85 90 95

Phe Gly Ala Ala Ser Asn Lys Ala Phe Ala Glu Gly Leu Ser Gly Glu
100 105 110

Pro Lys Gly Ala Ala Glu Ser Ser Ser Lys Ala Ala Leu Thr Ser Lys
115 120 125

Leu Asp Ala Ala Tyr Lys Leu Ala Tyr Lys Thr Ala Glu Gly Ala Thr
130 135 140

Pro Glu Ala Lys Tyr Asp Ala Tyr Val Ala Thr Val Ser Glu Ala Leu
145 150 155 160

Arg Ile Ile Ala Gly Thr Leu Glu Val His Ala Val Lys Pro Ala Ala
165 170 175

Glu Glu Val Lys Val Ile Pro Ala Gly Glu Leu Gln Val Ile Glu Lys
180 185 190

Val Asp Ala Ala Phe Lys Val Ala Ala Thr Ala Ala Asn Ala Ala Pro
195 200 205

Ala Asn Asp Lys Phe Thr Val Phe Glu Ala Ala Phe Asn Asp Ala Ile
210 215 220

Lys Ala Ser Thr Gly Gly Ala Tyr Glu Ser Tyr Lys Phe Ile Pro Ala
225 230 235 240

Leu Glu Ala Ala Val Lys Gln Ala Tyr Ala Ala Thr Val Ala Thr Ala
245 250 255

Pro Glu Val Lys Tyr Thr Val Phe Glu Thr Ala Leu Lys Lys Ala Ile
260 265 270

Thr Ala Met Ser Glu Ala Gln Lys Ala Ala Lys Pro Ala Ala Ala Ala
275 280 285

Thr Ala Thr Ala Thr Ala Ala Val Gly Ala Ala Thr Gly Ala Ala Thr
290 295 300

Ala Ala Thr Gly Gly Tyr Lys Val
305 310

<210> 62
<211> 276
<212> PRT
<213> Phleum pratense

<400> 63

Ala Asp Leu Gly Tyr Glu Glu Pro Ala Thr [illegible]

Lys Leu Asn Asp Gly Thr Lys Ala Ala Leu Ala Ala Ala Ala Ala Gly Val
35 40 45

50 55 60

Ser Asn Lys Ala Phe Ala Glu Gly Leu Ser Ala Glu Pro Lys Gly Ala
65 70 75 80

Ala Glu Ser Ser Ser Lys Ala Ala Leu Thr Ser Lys Leu Asp Ala Ala
85 90 95

Tyr Lys Leu Ala Tyr Lys Thr Ala Glu Gly Ala Thr Pro Glu Ala Lys
100 105 110

Tyr Asp Ala Tyr Val Ala Thr Leu Ser Glu Ala Leu Arg Ile Ile Ala
115 120 125

Gly Thr Leu Glu Val His Ala Val Lys Pro Ala Ala Glu Glu Val Lys
130 135 140

Val Ile Pro Ala Gly Glu Leu Gln Val Ile Glu Lys Val Asp Ser Ala
145 150 155 160

Phe Lys Val Ala Ala Thr Ala Ala Asn Ala Ala Pro Ala Asn Asp Lys
165 170 175

Phe Thr Val Phe Glu Ala Ala Phe Asn Asn Ala Ile Lys Ala Ser Thr
180 185 190

Gly Gly Ala Tyr Glu Ser Tyr Lys Phe Ile Pro Ala Leu Glu Ala Ala
195 200 205

Val Lys Gln Ala Tyr Ala Ala Thr Val Ala Thr Ala Pro Glu Val Lys
210 215 220

Tyr Thr Val Phe Glu Thr Ala Leu Lys Lys Ala Phe Thr Ala Met Ser
225 230 235 240

Glu Ala Gln Lys Ala Ala Lys Pro Ala Thr Glu Ala Thr Ala Thr Ala
245 250 255

Thr Ala Ala Val Gly Ala Ala Thr Gly Ala Ala Thr Ala Ala Thr Gly
260 265 270

Gly Tyr Lys Val
275

<210> 64
<211> 234
<212> PRT
<213> Phleum pratense

<400> 64

Ala Ala Ala Ala Val Pro Arg Arg Gly Pro Arg [illegible]

Gly Ala Ala Ala Gly Lys Ala Thr Thr Glu Glu Gln Lys Leu Ile Glu
35 40 45

50 55 60

Pro Ala Ala Asp Lys Phe Lys Thr Phe Glu Ala Ala Phe Thr Ser Ser
65 70 75 80

Ser Lys Ala Ala Ala Ala Lys Ala Pro Gly Leu Val Pro Lys Leu Asp
85 90 95

Ala Ala Tyr Ser Val Ala Tyr Lys Ala Ala Val Gly Ala Thr Pro Glu
100 105 110

Ala Lys Phe Asp Ser Phe Val Ala Ser Leu Thr Glu Ala Leu Arg Val
115 120 125

Ile Ala Gly Ala Leu Glu Val His Ala Val Lys Pro Val Thr Glu Glu
130 135 140

Pro Gly Met Ala Lys Ile Pro Ala Gly Glu Leu Gln Ile Ile Asp Lys
145 150 155 160

Ile Asp Ala Ala Phe Lys Val Ala Ala Thr Ala Ala Ala Thr Ala Pro
165 170 175

Ala Asp Asp Lys Phe Thr Val Phe Glu Ala Ala Phe Asn Lys Ala Ile
180 185 190

Lys Glu Ser Thr Gly Gly Ala Tyr Asp Thr Tyr Lys Cys Ile Pro Ser
195 200 205

Leu Glu Ala Ala Val Lys Gln Ala Tyr Ala Ala Thr Val Ala Ala Ala
210 215 220

Pro Gln Val Lys Tyr Ala Val Phe Glu Ala Ala Leu Thr Lys Ala Ile
225 230 235 240

Thr Ala Met Ser Glu Val Gln Lys Val Ser Gln Pro Ala Thr Gly Ala
245 250 255

Ala Thr Val Ala Ala Gly Ala Ala Thr Thr Ala Ala Gly Ala Ala Ser
260 265 270

Gly Ala Ala Thr Val Ala Ala Gly Gly Tyr Lys Val
275 280

<210> 65
<211> 286
<212> PRT
<213> Phleum pratense

<400> 65

Ala Asp Leu Gly Tyr Gly Pro Ala Thr Pro [illegible]

[illegible] Ala Thr Thr [illegible] Gln Lys Leu Ile [illegible] Lys Ile Asn Ala Gly
35 40 45

50 55 60

Arg Thr Phe Val Ala Thr Phe Gly Pro Ala Ser Asn Lys Ala Phe Ala
65 70 75 80

Glu Gly Leu Ser Gly Glu Pro Lys Gly Ala Ala Glu Ser Ser Ser Lys
85 90 95

Ala Ala Leu Thr Ser Lys Leu Asp Ala Ala Tyr Lys Leu Ala Tyr Lys
100 105 110

Thr Ala Glu Gly Ala Thr Pro Glu Ala Lys Tyr Asp Ala Tyr Val Ala
115 120 125

Thr Leu Ser Glu Ala Leu Arg Ile Ile Ala Gly Thr Leu Glu Val His
130 135 140

Ala Val Lys Pro Ala Ala Glu Glu Val Lys Val Ile Pro Ala Gly Glu
145 150 155 160

Leu Gln Val Ile Glu Lys Val Asp Ala Ala Phe Lys Val Ala Ala Thr
165 170 175

Ala Ala Asn Ala Ala Pro Ala Asn Asp Lys Phe Thr Val Phe Glu Ala
180 185 190

Ala Phe Asn Asp Glu Ile Lys Ala Ser Thr Gly Gly Ala Tyr Glu Ser
195 200 205

Tyr Lys Phe Ile Pro Ala Leu Glu Ala Ala Val Lys Gln Ala Tyr Ala
210 215 220

Ala Thr Val Ala Thr Ala Pro Glu Val Lys Tyr Thr Val Phe Glu Thr
225 230 235 240

Ala Leu Lys Lys Ala Ile Thr Ala Met Ser Glu Ala Gln Lys Ala Ala
245 250 255

Lys Pro Ala Ala Ala Ala Thr Ala Thr Ala Thr Ala Ala Val Gly Ala
260 265 270

Ala Thr Gly Ala Ala Thr Ala Ala Thr Gly Gly Tyr Lys Val
275 280 [illegible]

<210> 66
<211> 281
<212> PRT
<213> Phleum pratense

<400> 66

Ala Val Pro Arg Arg Gly Pro Arg [illegible]

[illegible] Thr Thr [illegible] Asp [illegible]
35 40 45

50 55 60

Asp Lys Phe Lys Thr Phe Glu Ala Ala Phe Thr Ser Ser Ser Lys Ala
65 70 75 80

Ala Thr Ala Lys Ala Pro Gly Leu Val Pro Lys Leu Asp Ala Ala Tyr
85 90 95

Ser Val Ala Tyr Lys Ala Ala Val Gly Ala Thr Pro Glu Ala Lys Phe
100 105 110

Asp Ser Phe Val Ala Ser Leu Thr Glu Ala Leu Arg Val Ile Ala Gly
115 120 125

Ala Leu Glu Val His Ala Val Lys Pro Val Thr Glu Glu Pro Gly Met
130 135 140

Ala Lys Ile Pro Ala Gly Glu Leu Gln Ile Ile Asp Lys Ile Asp Ala
145 150 155 160

Ala Phe Lys Val Ala Ala Thr Ala Ala Ala Thr Ala Pro Ala Asp Asp
165 170 175

Lys Phe Thr Val Phe Glu Ala Ala Phe Asn Lys Ala Ile Lys Glu Ser
180 185 190

Thr Gly Gly Ala Tyr Asp Thr Tyr Lys Cys Ile Pro Ser Leu Glu Ala
195 200 205

Ala Val Lys Gln Ala Tyr Ala Ala Thr Val Ala Ala Ala Pro Gln Val
210 215 220

Lys Tyr Ala Val Phe Glu Ala Ala Leu Thr Lys Ala Ile Thr Ala Met
225 230 235 240

Ser Glu Val Gln Lys Val Ser Gln Pro Ala Thr Gly Ala Ala Thr Val
245 250 255

Ala Ala Gly Ala Ala Thr Thr Ala Thr Gly Ala Ala Ser Gly Ala Ala
260 265 270

Thr Val Ala Ala Gly Gly Tyr Lys Val
275 280

<210> 67
<211> 280
<212> PRT
<213> Phleum pratense

<400> 67

Met Ala Val Pro Arg Arg Gln [illegible]

Ala Ala Gly Lys Ala Thr Thr Gln Thr Thr Lys Leu Ile Glu Asp Val
35 40 45

50 55 60

Asp Lys Phe Lys Thr Phe Glu Ala Ala Ser Pro Arg His Pro Arg Pro
65 70 75 80

Leu Arg Gln Gly Ala Gly Leu Val Pro Lys Leu Asp Ala Ala Tyr Ser
85 90 95

Val Ala Tyr Lys Ala Ala Val Gly Ala Thr Pro Glu Ala Lys Phe Asp
100 105 110

Ser Phe Val Ala Ser Leu Thr Glu Ala Leu Arg Val Ile Ala Gly Ala
115 120 125

Leu Glu Val His Ala Val Lys Pro Val Thr Glu Glu Pro Gly Met Ala
130 135 140

Lys Ile Pro Ala Gly Glu Leu Gln Ile Ile Asp Lys Ile Asp Ala Ala
145 150 155 160

Phe Lys Val Ala Ala Thr Ala Ala Ala Thr Ala Pro Ala Asp Asp Lys
165 170 175

Phe Thr Val Phe Glu Ala Ala Phe Asn Lys Ala Ile Lys Glu Ser Thr
180 185 190

Gly Gly Ala Tyr Asp Thr Tyr Lys Cys Ile Pro Ser Leu Glu Ala Ala
195 200 205

Val Lys Gln Ala Tyr Ala Ala Thr Val Ala Ala Ala Ala Glu Val Lys
210 215 220

Tyr Ala Val Phe Glu Ala Ala Leu Thr Lys Ala Ile Thr Ala Met Ser
225 230 235 240

Glu Val Gln Lys Val Ser Gln Pro Ala Thr Gly Ala Ala Thr Val Ala
245 250 255

Ala Gly Ala Ala Thr Thr Ala Ala Gly Ala Ala Ser Gly Ala Ala Thr
260 265 270

Val Ala Ala Gly Gly Tyr Lys Val
275 280

<210> [illegible]
<211> 312
<212> PRT
<213> Phleum pratense

<400> 68

[illegible]

Ala Thr Pro Ala Ala Pro Ala Ala Gly Tyr Thr Pro Ala Thr Pro Ala
35 40 45

50 55 60

Lys Leu Ile Glu Lys Ile Asn Ala Gly Phe Lys Ala Ala Leu Ala Ala
65 70 75 80

Ala Ala Gly Val Gln Pro Ala Asp Lys Tyr Arg Thr Phe Val Ala Thr
85 90 95

Phe Gly Ala Ala Ser Asn Lys Ala Phe Ala Glu Gly Leu Ser Gly Glu
100 105 110

Pro Lys Gly Ala Ala Glu Ser Ser Ser Lys Ala Ala Leu Thr Ser Lys
115 120 125

Leu Asp Ala Ala Tyr Lys Leu Ala Tyr Lys Thr Ala Glu Gly Ala Thr
130 135 140

Pro Glu Ala Lys Tyr Asp Ala Tyr Val Ala Thr Leu Ser Glu Ala Leu
145 150 155 160

Arg Ile Ile Ala Gly Thr Leu Glu Val His Ala Val Lys Pro Ala Ala
165 170 175

Glu Glu Val Lys Val Ile Pro Ala Gly Glu Leu Gln Val Ile Glu Lys
180 185 190

Val Asp Ala Ala Phe Lys Val Ala Ala Thr Ala Ala Asn Ala Ala Pro
195 200 205

Ala Asn Asp Lys Phe Thr Val Phe Glu Ala Ala Phe Asn Asp Ala Ile
210 215 220

Lys Ala Ser Thr Gly Gly Ala Tyr Glu Ser Tyr Lys Phe Ile Pro Ala
225 230 235 240

Leu Glu Ala Ala Val Lys Gln Ala Tyr Ala Ala Thr Val Ala Thr Ala
245 250 255

Pro Glu Val Lys Tyr Thr Val Phe Glu Thr Ala Leu Lys Lys Ala Ile
260 265 270

Thr Ala Met Ser Glu Ala Gln Lys Ala Ala Lys Pro Ala Ala Ala Ala
275 280 285

Thr Ala Thr Ala Thr Ala Ala Val Gly Ala Ala Thr Gly Ala Ala Thr
290 295 300

Ala Ala Thr Gly Gly Tyr Lys Val
305 310

<210> 69

[illegible]

Thr Ala Ile Ala Gly Lys Ala Thr Thr Glu Glu Lys Leu Ile Glu
1 5 10 15

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                20                  25                  30

Ala Asp Lys Tyr Arg Thr Phe Val Ala Thr Phe Gly Pro Ala Ser Asn
            35                  40                  45

Lys Ala Phe Ala Glu Gly Leu Ser Gly Glu Pro Lys Gly Ala Ala Glu
        50                  55                  60

Ser Ser Ser Lys Ala Ala Leu Thr Ser Lys Leu Asp Ala Ala Tyr Lys
65                  70                  75                  80

Leu Ala Tyr Lys Thr Ala Glu Gly Ala Thr Pro Glu Ala Lys Tyr Asp
                85                  90                  95

Ala Tyr Val Ala Thr Leu Ser Glu Ala Leu Arg Ile Ile Ala Gly Thr
            100                 105                 110

Leu Glu Val His Ala Val Lys Pro Ala Ala Glu Glu Val Lys Val Ile
        115                 120                 125

Pro Ala Ala Glu Leu Gln Val Ile Glu Lys Val Asp Ala Ala Phe Lys
    130                 135                 140

Val Ala Ala Thr Ala Ala Asn Ala Ala Pro Ala Asn Asp Lys Phe Thr
145                 150                 155                 160

Val Phe Glu Ala Ala Phe Asn Asp Glu Ile Lys Ala Ser Thr Gly Gly
                165                 170                 175

Ala Tyr Glu Ser Tyr Lys Phe Ile Pro Ala Leu Glu Ala Ala Val Lys
            180                 185                 190

Gln Ala Tyr Ala Ala Thr Val Ala Thr Ala Pro Glu Val Lys Tyr Thr
        195                 200                 205

Val Phe Glu Thr Ala Leu Lys Lys Ala Ile Thr Ala Met Ser Glu Ala
    210                 215                 220

Gln Lys Ala Ala Lys Pro Pro Pro Leu Pro Pro Pro Pro Gln Pro Pro
225                 230                 235                 240

Pro Leu Ala Ala Thr Gly Ala Ala Thr Ala Ala Thr Gly Gly Tyr Lys
                245                 250                 255

Val
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<210> 72
<211> 312
<212> PRT
<213> Phleum pratense

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Val Ala Gly Thr Ala Ala Ser Tyr Ala Ala Asp Leu Gly Tyr Gly Thr
            20                  25                  30
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        35                  40                  45

Ala Pro Ala Glu Ala Ala Pro Ala Gly Lys Ala Thr Thr Glu Glu Gln
    50                  55                  60

Lys Leu Ile Glu Lys Ile Asn Ala Gly Phe Lys Ala Ala Leu Ala Ala
65                  70                  75                  80

Ala Ala Gly Val Gln Pro Ala Asp Lys Tyr Arg Thr Phe Val Ala Thr
                85                  90                  95

Phe Gly Ala Ala Ser Asn Lys Ala Phe Ala Glu Gly Leu Ser Gly Glu
            100                 105                 110

Pro Lys Gly Ala Ala Glu Ser Ser Ser Lys Ala Ala Leu Thr Ser Lys
        115                 120                 125

Leu Asp Ala Ala Tyr Lys Leu Ala Tyr Lys Thr Ala Glu Gly Ala Thr
    130                 135                 140

Pro Glu Ala Lys Tyr Asp Ala Tyr Val Ala Thr Leu Ser Glu Ala Leu
145                 150                 155                 160

Arg Ile Ile Ala Gly Thr Leu Glu Val His Ala Val Lys Pro Ala Ala
                165                 170                 175

Glu Glu Val Lys Val Ile Pro Ala Gly Glu Leu Gln Val Ile Glu Lys
            180                 185                 190

Val Asp Ala Ala Phe Lys Val Ala Ala Thr Ala Ala Asn Ala Ala Pro
        195                 200                 205

Ala Asn Asp Lys Phe Thr Val Phe Glu Ala Ala Phe Asn Asp Ala Ile
    210                 215                 220

Lys Ala Ser Thr Gly Gly Ala Tyr Glu Ser Tyr Lys Phe Ile Pro Ala
225                 230                 235                 240

Leu Glu Ala Ala Val Lys Gln Ala Tyr Ala Ala Thr Val Ala Thr Ala
                245                 250                 255

Pro Glu Val Lys Tyr Thr Val Phe Glu Thr Ala Leu Lys Lys Ala Ile
            260                 265                 270

Thr Ala Met Ser Glu Ala Gln Lys Ala Ala Lys Pro Ala Ala Ala Ala
        275                 280                 285

Thr Ala Thr Ala Thr Ala Ala Val Gly Ala Ala Thr Gly Ala Ala Thr
    290                 295                 300

Ala Ala Thr Gly Gly Tyr Lys Val
```

<400> 71

1 5 10 15

Thr Ala Asp Ala Gly Tyr Ala Pro Ala Thr Pro Ala Ala Ala Gly Ala
20 25 30

Ala Ala Gly Lys Ala Thr Thr Glu Glu Gln Lys Leu Ile Glu Asp Ile
35 40 45

Asn Val Gly Phe Lys Ala Ala Val Ala Ala Arg Gln Arg Pro Ala Ala
50 55 60

Asp Lys Phe Lys Thr Phe Glu Ala Ala Ser Pro Arg His Pro Arg Pro
65 70 75 80

Leu Arg Gln Gly Ala Gly Leu Val Pro Lys Leu Asp Ala Ala Tyr Ser
85 90 95

Val Ala Tyr Lys Ala Ala Val Gly Ala Thr Pro Glu Ala Lys Phe Asp
100 105 110

Ser Phe Val Ala Ser Leu Thr Glu Ala Leu Arg Val Ile Ala Gly Ala
115 120 125

Leu Glu Val His Ala Val Lys Pro Val Thr Glu Glu Pro Gly Met Ala
130 135 140

Lys Ile Pro Ala Gly Glu Leu Gln Ile Ile Asp Lys Ile Asp Ala Ala
145 150 155 160

Phe Lys Val Ala Ala Thr Ala Ala Ala Thr Ala Pro Ala Asp Asp Lys
165 170 175

Phe Thr Val Phe Glu Ala Ala Phe Asn Lys Ala Ile Lys Glu Ser Thr
180 185 190

Gly Gly Ala Tyr Asp Thr Tyr Lys Cys Ile Pro Ser Leu Glu Ala Ala
195 200 205

Val Lys Gln Ala Tyr Ala Ala Thr Val Ala Ala Ala Ala Glu Val Lys
210 215 220

Tyr Ala Val Phe Glu Ala Ala Leu Thr Lys Ala Ile Thr Ala Met Ser
225 230 235 240

Glu Val Gln Lys Val Ser Gln Pro Ala Thr Gly Ala Ala Thr Val Ala
245 250 255

Ala Gly Ala Ala Thr Thr Ala Ala Gly Ala Ala Ser Gly Ala Ala Thr
260 265 270

Val Ala Ala Gly Gly Tyr Lys Val

<400> 72

1 5 10 15

Tyr Thr Pro Ala Thr Pro Ala Ala Pro Ala Gly Ala Asp Ala Ala Gly
20 25 30

Lys Ala Thr Thr Glu Glu Gln Lys Leu Ile Glu Lys Ile Asn Ala Gly
35 40 45

Phe Lys Ala Ala Leu Ala Gly Ala Gly Val Gln Pro Ala Asp Lys Tyr
50 55 60

Arg Thr Phe Val Ala Thr Phe Gly Pro Ala Ser Asn Lys Ala Phe Ala
65 70 75 80

Glu Gly Leu Ser Gly Glu Pro Lys Gly Ala Ala Glu Ser Ser Ser Lys
85 90 95

Ala Ala Leu Thr Ser Lys Leu Asp Ala Ala Tyr Lys Leu Ala Tyr Lys
100 105 110

Thr Ala Glu Gly Ala Thr Pro Glu Ala Lys Tyr Asp Ala Tyr Val Ala
115 120 125

Thr Leu Ser Glu Ala Leu Arg Ile Ile Ala Gly Thr Leu Glu Val His
130 135 140

Ala Val Lys Pro Ala Ala Glu Glu Val Lys Val Ile Pro Ala Gly Glu
145 150 155 160

Leu Gln Val Ile Glu Lys Val Asp Ala Ala Phe Lys Val Ala Ala Thr
165 170 175

Ala Ala Asn Ala Ala Pro Ala Asn Asp Lys Phe Thr Val Phe Glu Ala
180 185 190

Ala Phe Asn Asp Glu Ile Lys Ala Ser Thr Gly Gly Ala Tyr Glu Ser
195 200 205

Tyr Lys Phe Ile Pro Ala Leu Glu Ala Ala Val Lys Gln Ala Tyr Ala
210 215 220

Ala Thr Val Ala Thr Ala Pro Glu Val Lys Tyr Thr Val Phe Glu Thr
225 230 235 240

Ala Leu Lys Lys Ala Ile Thr Ala Met Ser Glu Ala Gln Lys Ala Ala
245 250 255

Lys Pro Pro Pro Leu Pro Pro Pro Pro Gln Pro Pro Pro Leu Ala Ala
260 265 270

Thr Gly Ala Ala Thr Ala Ala Thr Gly Gly Tyr Lys Val
275 280

<400> 73

1 5 10 15

Val Ala Gly Pro Ala Ala Ser Tyr Ala Ala Asp Leu Gly Tyr Gly Pro
20 25 30

Ala Thr Pro Ala Ala Pro Ala Ala Gly Tyr Thr Pro Ala Thr Pro Ala
35 40 45

Ala Pro Ala Glu Ala Ala Pro Ala Gly Lys Ala Thr Thr Glu Glu Gln
50 55 60

Lys Leu Ile Glu Lys Ile Asn Ala Gly Phe Lys Ala Ala Leu Ala Ala
65 70 75 80

Ala Ala Gly Val Gln Pro Ala Asp Lys Tyr Arg Thr Phe Val Ala Thr
85 90 95

Phe Gly Ala Ala Ser Asn Lys Ala Phe Ala Glu Gly Leu Ser Gly Glu
100 105 110

Pro Lys Gly Ala Ala Glu Ser Ser Ser Lys Ala Ala Leu Thr Ser Lys
115 120 125

Leu Asp Ala Ala Tyr Lys Leu Ala Tyr Lys Thr Ala Glu Gly Ala Thr
130 135 140

Pro Glu Ala Lys Tyr Asp Ala Tyr Val Ala Thr Leu Ser Glu Ala Leu
145 150 155 160

Arg Ile Ile Ala Gly Thr Leu Glu Val His Ala Val Lys Pro Ala Ala
165 170 175

Glu Glu Val Lys Val Ile Pro Ala Gly Glu Leu Gln Val Ile Glu Lys
180 185 190

Val Asp Ala Ala Phe Lys Val Ala Ala Thr Ala Ala Asn Ala Ala Pro
195 200 205

Ala Asn Asp Lys Phe Thr Val Phe Glu Ala Ala Phe Asn Asp Ala Ile
210 215 220

Lys Ala Ser Thr Gly Gly Ala Tyr Glu Ser Tyr Lys Phe Ile Pro Ala
225 230 235 240

Leu Glu Ala Ala Val Lys Gln Ala Tyr Ala Ala Thr Val Ala Thr Ala
245 250 255

Pro Glu Val Lys Tyr Thr Val Phe Glu Thr Ala Leu Lys Lys Ala Ile
260 265 270

Thr Ala Met Ser Glu Ala Gln Lys Ala Ala Lys Pro Ala Ala Ala Ala

<212> PRT
<213> Phleum pratense

<400> 74

Met Ala Ala His Lys Phe Met Val Ala Met Phe Leu Ala Val Ala Val
1 5 10 15

Val Leu Gly Leu Ala Thr Ser Pro Thr Ala Glu Gly Gly Lys Ala Thr
20 25 30

Thr Glu Glu Gln Lys Leu Ile Glu Asp Val Asn Ala Ser Phe Arg Ala
35 40 45

Ala Met Ala Thr Thr Ala Asn Val Pro Pro Ala Asp Lys Tyr Lys Thr
50 55 60

Phe Glu Ala Ala Phe Thr Val Ser Ser Lys Arg Asn Leu Ala Asp Ala
65 70 75 80

Val Ser Lys Ala Pro Gln Leu Val Pro Lys Leu Asp Glu Val Tyr Asn
85 90 95

Ala Ala Tyr Asn Ala Ala Asp His Ala Ala Pro Glu Asp Lys Tyr Glu
100 105 110

Ala Phe Val Leu His Phe Ser Glu Ala Leu Arg Ile Ile Ala Gly Thr
115 120 125

Pro Glu Val His Ala Val Lys Pro Gly Ala
130 135

<210> 75
<211> 57
<212> PRT
<213> Phleum pratense

<400> 75

Ser Lys Ala Pro Gln Leu Val Pro Lys Leu Asp Glu Val Tyr Asn Ala
1 5 10 15

Ala Tyr Asn Ala Ala Asp His Ala Ala Pro Glu Asp Lys Tyr Glu Ala
20 25 30

Phe Val Leu His Phe Ser Glu Ala Leu His Ile Ile Ala Gly Thr Pro
35 40 45

Glu Val His Ala Val Lys Pro Gly Ala
50 55

Ala Asp Lys Tyr Lys Thr Phe Glu Ala Ala Phe Thr Val Ser Ser Lys

Arg Asn Leu Ala Asp Ala Val Ser Lys Ala Pro Gln Leu Val Pro Lys
20 25 30

Leu Asp Glu Val Tyr Asn Ala Ala Tyr Asn Ala Ala Asp His Ala Ala
35 40 45

Pro Glu Asp Lys Tyr Glu Ala Phe Val Leu His Phe Ser Glu Ala Leu
50 55 60

His Ile Ile Ala Gly Thr Pro Glu Val His Ala Val Lys Pro Gly Ala
65 70 75 80

<210> 77
<211> 106
<212> PRT
<213> Phleum pratense

<400> 77

Thr Glu Glu Gln Lys Leu Ile Glu Asp Val Asn Ala Ser Phe Arg Ala
1 5 10 15

Ala Met Ala Thr Thr Ala Asn Val Pro Pro Ala Asp Lys Tyr Lys Thr
20 25 30

Leu Glu Ala Ala Phe Thr Val Ser Ser Lys Arg Asn Leu Ala Asp Ala
35 40 45

Val Ser Lys Ala Pro Gln Leu Val Pro Lys Leu Asp Glu Val Tyr Asn
50 55 60

Ala Ala Tyr Asn Ala Ala Asp His Ala Ala Pro Glu Asp Lys Tyr Glu
65 70 75 80

Ala Phe Val Leu His Phe Ser Glu Ala Leu Arg Ile Ile Ala Gly Thr
85 90 95

Pro Glu Val His Ala Val Lys Pro Gly Ala
100 105

<210> 78
<211> 138
<212> PRT
<213> Phleum pratense

<400> 78

Met Ala Ala His Lys Phe Met Val Ala Met Phe Leu Ala Val Ala Val
1 5 10 15

Val Leu Gly Leu Ala Thr Ser Pro Thr Ala Glu Gly Gly Lys Ala Thr

Ala Met Ala Thr Thr Ala Asn Val Pro Pro Ala Asp Lys Tyr Lys Thr

Val Ser Lys Ala Pro Gln Leu Val Pro Lys Leu Asp Glu Val Tyr Asn
85 90 95

Ala Ala Tyr Asn Ala Ala Asp His Ala Ala Pro Glu Asp Lys Tyr Glu
100 105 110

Ala Phe Val Leu His Phe Ser Glu Ala Leu His Ile Ile Ala Gly Thr
115 120 125

Pro Glu Val His Ala Val Lys Pro Gly Ala
130 135

<210> 79
<211> 132
<212> PRT
<213> Phleum pratense

<400> 79

Met Val Ala Met Phe Leu Ala Val Ala Val Val Leu Gly Leu Ala Thr
1 5 10 15

Ser Pro Thr Ala Glu Gly Gly Lys Ala Thr Thr Glu Glu Gln Lys Leu
20 25 30

Ile Glu Asp Val Asn Ala Ser Phe Arg Ala Ala Met Ala Thr Thr Ala
35 40 45

Asn Val Pro Pro Ala Asp Lys Tyr Lys Thr Phe Glu Ala Ala Phe Thr
50 55 60

Val Ser Ser Lys Arg Asn Leu Ala Asp Ala Val Ser Lys Ala Pro Gln
65 70 75 80

Leu Val Pro Lys Leu Asp Glu Val Tyr Asn Ala Ala Tyr Asn Ala Ala
85 90 95

Asp His Ala Ala Pro Glu Asp Lys Tyr Glu Ala Phe Val Leu His Phe
100 105 110

Ser Glu Ala Leu Arg Ile Ile Ala Gly Thr Pro Glu Val His Ala Val
115 120 125

Lys Pro Gly Ala
130

<210> 80
<211> 78
<212> PRT
<213> Phleum pratense

Asp Gly Lys Ile Ser Leu Ser Glu Ile Leu Thr Ala Leu Arg Thr Leu
20 25 30

35 40 45

Thr Asp Gly Asp Gly Phe Ile Asp Phe Asn Glu Phe Ile Ser Phe Cys
50 55 60

Asn Ala Asn Pro Gly Leu Met Lys Asp Val Ala Lys Val Phe
65 70 75

<210> 81
<211> 131
<212> PRT
<213> Phleum pratense

<400> 81

Met Ser Trp Gln Thr Tyr Val Asp Glu His Leu Met Cys Glu Ile Glu
1 5 10 15

Gly His His Leu Ala Ser Ala Ala Ile Leu Gly His Asp Gly Thr Val
20 25 30

Trp Ala Gln Ser Ala Asp Phe Pro Gln Phe Lys Pro Glu Glu Ile Thr
35 40 45

Gly Ile Met Lys Asp Phe Asp Glu Pro Gly His Leu Ala Pro Thr Gly
50 55 60

Met Phe Val Ala Gly Ala Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
65 70 75 80

Arg Val Ile Arg Gly Lys Lys Gly Ala Gly Gly Ile Thr Ile Lys Lys
85 90 95

Thr Gly Gln Ala Leu Val Val Gly Ile Tyr Asp Glu Pro Met Thr Pro
100 105 110

Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu Val Glu
115 120 125

Gln Gly Met
130

<210> 82
<211> 227
<212> PRT
<213> Vespula vulgaris

<400> 82

Met Glu Ile Ser Gly Leu Val Tyr Leu Ile Ile Ile Val Thr Ile Ile
1 5 10 15

Cys Gly Asn Lys Val Val Val Ser Tyr Gly Leu Thr Lys Gln Glu Lys

Gln Asp Ile Leu Lys Glu His Asn Asp Phe Arg Gln Lys Ile Ala Arg
65 70 75 80

Gly Leu Glu Thr Arg Gly Asn Pro Gly Pro Gln Pro Pro Ala Lys Asn
85 90 95

Met Lys Asn Leu Val Trp Asn Asp Glu Leu Ala Tyr Val Ala Gln Val
100 105 110

Trp Ala Asn Gln Cys Gln Tyr Gly His Asp Thr Cys Arg Asp Val Ala
115 120 125

Lys Tyr Gln Val Gly Gln Asn Val Ala Leu Thr Gly Ser Thr Ala Ala
130 135 140

Lys Tyr Asp Asp Pro Val Lys Leu Val Lys Met Trp Glu Asp Glu Val
145 150 155 160

Lys Asp Tyr Asn Pro Lys Lys Lys Phe Ser Gly Asn Asp Phe Leu Lys
165 170 175

Thr Gly His Tyr Thr Gln Met Val Trp Ala Asn Thr Lys Glu Val Gly
180 185 190

Cys Gly Ser Ile Lys Tyr Ile Gln Glu Lys Trp His Lys His Tyr Leu
195 200 205

Val Cys Asn Tyr Gly Pro Ser Gly Asn Phe Met Asn Glu Glu Leu Tyr
210 215 220

Gln Thr Lys
225

<210> 83
<211> 300
<212> PRT
<213> Vespula maculifrons

<400> 83

Gly Pro Lys Cys Pro Phe Asn Ser Asp Thr Val Ser Ile Ile Ile Glu
1 5 10 15

Thr Arg Glu Asn Arg Asn Arg Asp Leu Tyr Thr Leu Glu Thr Leu Gln
20 25 30

Asn His Pro Glu Phe Lys Lys Lys Thr Ile Thr Arg Pro Val Val Phe
35 40 45

Ile Thr His Gly Phe Thr Ser Ser Ala Ser Glu Lys Asn Phe Ile Asn
50 55 60

Ala Tyr Tyr Pro Thr Ala Ala Ser Asn Thr Arg Leu Val Gly Gln Tyr

Ile Ala Thr Ile Thr Gln Lys Leu Val Lys Asp Tyr Lys Ile Ser Met
115 120 125

Ala Asn Ile Arg Leu Ile Gly His Ser Leu Gly Ala His Val Ser Gly
130 135 140

Phe Ala Gly Lys Arg Val Gln Glu Leu Lys Leu Gly Lys Tyr Ser Glu
145 150 155 160

Ile Ile Gly Leu Asp Pro Ala Arg Pro Ser Phe Asp Ser Asn His Cys
165 170 175

Ser Glu Arg Leu Cys Glu Thr Asp Ala Glu Tyr Val Gln Ile Ile His
180 185 190

Thr Ser Asn Tyr Leu Gly Thr Glu Lys Ile Leu Gly Thr Val Asp Phe
195 200 205

Tyr Met Asn Asn Gly Lys Asn Asn Pro Gly Cys Gly Arg Phe Phe Ser
210 215 220

Glu Val Cys Ser His Thr Arg Ala Val Ile Tyr Met Ala Glu Cys Ile
225 230 235 240

Lys His Glu Cys Cys Leu Ile Gly Ile Pro Arg Ser Lys Ser Ser Gln
245 250 255

Pro Ile Ser Arg Cys Thr Lys Gln Glu Cys Val Cys Val Gly Leu Asn
260 265 270

Ala Lys Lys Tyr Pro Ser Arg Gly Ser Phe Tyr Val Pro Val Glu Ser
275 280 285

Thr Ala Pro Phe Cys Asn Asn Lys Gly Lys Ile Ile
290 295 300

<210> 84
<211> 336
<212> PRT
<213> Vespula vulgaris

<400> 84

Met Glu Glu Asn Met Asn Leu Lys Tyr Leu Leu Leu Phe Val Tyr Phe
1 5 10 15

Val Gln Val Leu Asn Cys Cys Tyr Gly His Gly Asp Pro Leu Ser Tyr
20 25 30

Glu Leu Asp Arg Gly Pro Lys Cys Pro Phe Asn Ser Asp Thr Val Ser
35 40 45

Pro Val Val Phe Ile Thr His Gly Phe Thr Ser Ser Ala Ser Glu Thr

Asn Phe Ile Asn Leu Ala Lys Ala Leu Val Asp Lys Asp Asn Tyr Met
100 105 110

Val Ile Ser Ile Asp Trp Gln Thr Ala Ala Cys Thr Asn Glu Ala Ala
115 120 125

Gly Leu Lys Tyr Leu Tyr Tyr Pro Thr Ala Ala Arg Asn Thr Arg Leu
130 135 140

Val Gly Gln Tyr Ile Ala Thr Ile Thr Gln Lys Leu Val Lys His Tyr
145 150 155 160

Lys Ile Ser Met Ala Asn Ile Arg Leu Ile Gly His Ser Leu Gly Ala
165 170 175

His Ala Ser Gly Phe Ala Gly Lys Lys Val Gln Glu Leu Lys Leu Gly
180 185 190

Lys Tyr Ser Glu Ile Ile Gly Leu Asp Pro Ala Arg Pro Ser Phe Asp
195 200 205

Ser Asn His Cys Ser Glu Arg Leu Cys Glu Thr Asp Ala Glu Tyr Val
210 215 220

Gln Ile Ile His Thr Ser Asn Tyr Leu Gly Thr Glu Lys Thr Leu Gly
225 230 235 240

Thr Val Asp Phe Tyr Met Asn Asn Gly Lys Asn Gln Pro Gly Cys Gly
245 250 255

Arg Phe Phe Ser Glu Val Cys Ser His Ser Arg Ala Val Ile Tyr Met
260 265 270

Ala Glu Cys Ile Lys His Glu Cys Cys Leu Ile Gly Ile Pro Lys Ser
275 280 285

Lys Ser Ser Gln Pro Ile Ser Ser Cys Thr Lys Gln Glu Cys Val Cys
290 295 300

Val Gly Leu Asn Ala Lys Lys Tyr Pro Ser Arg Gly Ser Phe Tyr Val
305 310 315 320

Val Glu Ser Thr Ala Pro Phe Cys Asn Asn Lys Gly Lys Ile Ile
325 330 335

<210> 85
<211> 331
<212> PRT
<213> Vespula vulgaris

<400> 85

Asn Ile Lys Arg Asn Ser Lys Asp Asp Ile Gln Gly Asp Lys Ile Ala

```
Ile Phe Tyr Asp Pro Gly Glu Phe Pro Ala Leu Leu Ser Leu Lys Asp
    50                  55                  60

Gly Lys Tyr Lys Lys Arg Asn Gly Gly Val Pro Gln Glu Gly Asn Ile
65                  70                  75                  80

Thr Ile His Leu Gln Lys Phe Ile Glu Asn Leu Asp Lys Ile Tyr Pro
                85                  90                  95

Asn Arg Asn Phe Ser Gly Ile Gly Val Ile Asp Phe Glu Arg Trp Arg
            100                 105                 110

Pro Ile Phe Arg Gln Asn Trp Gly Asn Met Lys Ile His Lys Asn Phe
        115                 120                 125

Ser Ile Asp Leu Val Arg Asn Glu His Pro Thr Trp Asn Lys Lys Met
    130                 135                 140

Ile Glu Leu Glu Ala Ser Lys Arg Phe Glu Lys Tyr Ala Arg Phe Phe
145                 150                 155                 160

Met Glu Glu Thr Leu Lys Leu Ala Lys Lys Thr Arg Lys Gln Ala Asp
                165                 170                 175

Trp Gly Tyr Tyr Gly Tyr Pro Tyr Cys Phe Asn Met Ser Pro Asn Asn
            180                 185                 190

Leu Val Pro Glu Cys Asp Val Thr Ala Met His Glu Asn Asp Lys Met
        195                 200                 205

Ser Trp Leu Phe Asn Asn Gln Asn Val Leu Leu Pro Ser Val Tyr Val
    210                 215                 220

Arg Gln Glu Leu Thr Pro Asp Gln Arg Ile Gly Leu Val Gln Gly Arg
225                 230                 235                 240

Val Lys Glu Ala Val Arg Ile Ser Asn Asn Leu Lys His Ser Pro Lys
                245                 250                 255

Val Leu Ser Tyr Trp Trp Tyr Val Tyr Gln Asp Glu Thr Asn Thr Phe
            260                 265                 270

Leu Thr Glu Thr Asp Val Lys Lys Thr Phe Gln Glu Ile Val Ile Asn
        275                 280                 285

Gly Gly Asp Gly Ile Ile Ile Trp Gly Ser Ser Ser Asp Val Asn Ser
    290                 295                 300

Leu Ser Lys Cys Lys Arg Leu Gln Asp Tyr Leu Leu Thr Val Leu Gly
305                 310                 315                 320
```

Lys Val Asn Tyr Cys Lys Ile Lys Cys Leu Lys Gly Gly Val His Thr
1 5 10 15

Ala Cys Lys Tyr Gly Thr Ser Thr Lys Pro Asn Cys Gly Lys Met Val
20 25 30

Val Lys Ala Tyr Gly Leu Thr Glu Ala Glu Lys Gln Glu Ile Leu Lys
35 40 45

Val His Asn Asp Phe Arg Gln Lys Val Ala Lys Gly Leu Glu Thr Arg
50 55 60

Gly Asn Pro Gly Pro Gln Pro Pro Ala Lys Asn Met Asn Asn Leu Val
65 70 75 80

Trp Asn Asp Glu Leu Ala Asn Ile Ala Gln Val Trp Ala Ser Gln Cys
85 90 95

Asn Tyr Gly His Asp Thr Cys Lys Asp Thr Glu Lys Tyr Pro Val Gly
100 105 110

Gln Asn Ile Ala Lys Arg Ser Thr Thr Ala Ala Leu Phe Asp Ser Pro
115 120 125

Gly Lys Leu Val Lys Met Trp Glu Asn Glu Val Lys Asp Phe Asn Pro
130 135 140

Asn Ile Glu Trp Ser Lys Asn Asn Leu Lys Lys Thr Gly His Tyr Thr
145 150 155 160

Gln Met Val Trp Ala Lys Thr Lys Glu Ile Gly Cys Gly Ser Val Lys
165 170 175

Tyr Val Lys Asp Glu Trp Tyr Thr His Tyr Leu Val Cys Asn Tyr Gly
180 185 190

Pro Ser Gly Asn Phe Arg Asn Glu Lys Leu Tyr Glu Lys Lys
195 200 205

<210> 87
<211> 162
<212> PRT
<213> Bovine pancreas

<400> 87

Met Gly Val Phe Asn Tyr Glu Thr Glu Thr Thr Ser Val Ile Pro Ala
1 5 10 15

Ala Arg Leu Phe Lys Ala Phe Ile Leu Asp Gly Asp Asn Leu Phe Pro
20 25 30

Phe Lys Tyr Val Lys Asp Arg Val Asp Glu Val Asp His Thr Asn Phe

Lys Tyr Asn Tyr Ser Val Ile Glu Gly Gly Pro Ile Gly Asp Thr Leu
85 90 95

Glu Lys Ile Ser Asn Glu Ile Lys Ile Val Ala Thr Pro Asp Gly Gly
100 105 110

Ser Ile Leu Lys Ile Ser Asn Lys Tyr His Thr Lys Gly Asp His Glu
115 120 125

Val Lys Ala Glu Gln Val Lys Ala Ser Lys Glu Met Gly Glu Thr Leu
130 135 140

Leu Arg Ala Val Glu Ser Tyr Leu Leu Ala His Ser Asp Ala Tyr Asn
145 150 155 160

<210> 88
<211> 133
<212> PRT
<213> Betula pendula

<400> 88

Met Ser Trp Gln Thr Tyr Val Asp Glu His Leu Met Cys Asp Ile Asp
1 5 10 15

Gly Gln Ala Ser Asn Ser Leu Ala Ser Ala Ile Val Gly His Asp Gly
20 25 30

Ser Val Trp Ala Gln Ser Ser Ser Phe Pro Gln Phe Lys Pro Gln Glu
35 40 45

Ile Thr Gly Ile Met Lys Asp Phe Glu Glu Pro Gly His Leu Ala Pro
50 55 60

Thr Gly Leu His Leu Gly Gly Ile Lys Tyr Met Val Ile Gln Gly Glu
65 70 75 80

Ala Gly Ala Val Ile Arg Gly Lys Lys Gly Ser Gly Gly Ile Thr Ile
85 90 95

Lys Lys Thr Gly Gln Ala Leu Val Phe Gly Ile Tyr Glu Glu Pro Val
100 105 110

Thr Pro Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu
115 120 125

Ile Asp Gln Gly Leu
130

<210> 89
<211> 205
<212> PRT

[illegible]

Ser Thr Pro Arg [illegible]

Ser Glu Ser Leu Asn Thr Leu Arg Leu Arg Arg Ile Phe Asp Leu Phe
35 40 45

Asp Lys Asn Ser Asp Gly Ile Ile Thr Val Asp Glu Leu Ser Arg Ala
50 55 60

Leu Asn Leu Leu Gly Leu Glu Thr Asp Leu Ser Glu Leu Glu Ser Thr
65 70 75 80

Val Lys Ser Phe Thr Arg Glu Gly Asn Ile Gly Leu Gln Phe Glu Asp
85 90 95

Phe Ile Ser Leu His Gln Ser Leu Asn Asp Ser Tyr Phe Ala Tyr Gly
100 105 110

Gly Glu Asp Glu Asp Asp Asn Glu Glu Asp Met Arg Lys Ser Ile Leu
115 120 125

Ser Gln Glu Glu Ala Asp Ser Phe Gly Gly Phe Lys Val Phe Asp Glu
130 135 140

Asp Gly Asp Gly Tyr Ile Ser Ala Arg Glu Leu Gln Met Val Leu Gly
145 150 155 160

Lys Leu Gly Phe Ser Glu Gly Ser Glu Ile Asp Arg Val Glu Lys Met
165 170 175

Ile Val Ser Val Asp Ser Asn Arg Asp Gly Arg Val Asp Phe Phe Glu
180 185 190

Phe Lys Asp Met Met Arg Ser Val Leu Val Arg Ser Ser
195 200 205

<210> 90
<211> 85
<212> PRT
<213> Betula pendula

<400> 90

Met Ala Asp Asp His Pro Gln Asp Lys Ala Glu Arg Glu Arg Ile Phe
1 5 10 15

Lys Arg Phe Asp Ala Asn Gly Asp Gly Lys Ile Ser Ala Ala Glu Leu
20 25 30

Gly Glu Ala Leu Lys Thr Leu Gly Ser Ile Thr Pro Asp Glu Val Lys
35 40 45

His Met Met Ala Glu Ile Asp Thr Asp Gly Asp Gly Phe Ile Ser Phe

<2212> PRT
<2213> Quercus alba

<2220>
<2221> misc_feature
<2222> X is unknown amino acid

<4000> 91

Gly Val Phe Thr Xaa Glu Ser Gln Glu Thr Ser Val Ile Ala Pro Ala
1 5 10 15

Xaa Leu Phe Lys Ala Leu Phe Leu
20

<2210> 92
<2211> 40
<2212> PRT
<2213> Carpinus betulus

<2220>
<2221> misc_feature
<2223> X is unknown amino acid

<4000> 92

Gly Val Phe Asn Tyr Glu Ala Glu Thr Pro Ser Val Ile Pro Ala Ala
1 5 10 15

Arg Leu Phe Lys Ser Tyr Val Leu Asp Gly Asp Lys Leu Ile Pro Lys
20 25 30

Val Ala Pro Gln Ala Ile Xaa Lys
35 40

<2210> 93
<2211> 44
<2212> PRT
<2213> Alnus glutinosa

<4000> 93

Gly Val Phe Asn Tyr Glu Ala Glu Thr Pro Ser Val Ile Pro Ala Ala
1 5 10 15

Arg Leu Phe Lys Ala Phe Ile Leu Asp Gly Asp Lys Leu Leu Pro Lys
20 25 30

Val Ala Pro Glu Ala Val Ser Ser Val Glu Asn Ile
35 40

[illegible]

[illegible]

1 5 10 15

Thr Leu Ser Tyr Leu Pro Pro Leu Ser Ser Glu Gln Leu Ala Lys Glu
20 25 30

Val Asp Tyr Leu Leu Arg Lys Asn Leu Ile Pro Cys Leu Glu Phe Glu
35 40 45

Leu Glu His Gly Phe Val Tyr Arg Glu His Asn Arg Ser Pro Gly Tyr
50 55 60

Tyr Asp Gly Arg Tyr Trp Thr Met Trp Lys Leu Pro Met Phe Gly Cys
65 70 75 80

Asn Asp Ser Ser Gln Val Leu Lys Glu Leu Glu Glu Cys Lys Lys Ala
85 90 95

Tyr Pro Ser Ala Phe Ile Arg Ile Ile Gly Phe Asp Asp Lys
100 105 110

<210> 95
<211> 626
<212> PRT
<213> Arachis hypogaea

<400> 95

Met Arg Gly Arg Val Ser Pro Leu Met Leu Leu Leu Gly Ile Leu Val
1 5 10 15

Leu Ala Ser Val Ser Ala Thr His Ala Lys Ser Ser Pro Tyr Gln Lys
20 25 30

Lys Thr Glu Asn Pro Cys Ala Gln Arg Cys Leu Gln Ser Cys Gln Gln
35 40 45

Glu Pro Asp Asp Leu Lys Gln Lys Ala Cys Glu Ser Arg Cys Thr Lys
50 55 60

Leu Glu Tyr Asp Pro Arg Cys Val Tyr Asp Pro Arg Gly His Thr Gly
65 70 75 80

Thr Thr Asn Gln Arg Ser Pro Pro Gly Glu Arg Thr Arg Gly Arg Gln
85 90 95

Pro Gly Asp Tyr Asp Asp Asp Arg Arg Gln Pro Arg Arg Glu Glu Gly
100 105 110

Gly Arg Trp Gly Pro Ala Gly Pro Arg Glu Arg Glu Arg Glu Glu Asp
115 120 125

Trp Arg Gln Pro Arg Glu Asp Trp Arg Arg Pro Ser His Gln Gln Pro
130

[illegible] [illegible] [illegible] [illegible] Val Arg [illegible] [illegible] Thr [illegible] Arg Asn Asn [illegible] Phe Tyr
165 170 175

180 185 190

Ile Arg Val Leu Gln Arg Phe Asp Gln Arg Ser Arg Gln Phe Gln Asn
195 200 205

Leu Gln Asn His Arg Ile Val Gln Ile Glu Ala Lys Pro Asn Thr Leu
210 215 220

Val Leu Pro Lys His Ala Asp Ala Asp Asn Ile Leu Val Ile Gln Gln
225 230 235 240

Gly Gln Ala Thr Val Thr Val Ala Asn Gly Asn Asn Arg Lys Ser Phe
245 250 255

Asn Leu Asp Glu Gly His Ala Leu Arg Ile Pro Ser Gly Phe Ile Ser
260 265 270

Tyr Ile Leu Asn Arg His Asp Asn Gln Asn Leu Arg Val Ala Lys Ile
275 280 285

Ser Met Pro Val Asn Thr Pro Gly Gln Phe Glu Asp Phe Phe Pro Ala
290 295 300

Ser Ser Arg Asp Gln Ser Ser Tyr Leu Gln Gly Phe Ser Arg Asn Thr
305 310 315 320

Leu Glu Ala Ala Phe Asn Ala Glu Phe Asn Glu Ile Arg Arg Val Leu
325 330 335

Leu Glu Glu Asn Ala Gly Gly Glu Gln Glu Glu Arg Gly Gln Arg Arg
340 345 350

Trp Ser Thr Arg Ser Ser Glu Asn Asn Glu Gly Val Ile Val Lys Val
355 360 365

Ser Lys Glu His Val Glu Glu Leu Thr Lys His Ala Lys Ser Val Ser
370 375 380

Lys Lys Gly Ser Glu Glu Glu Gly Asp Ile Thr Asn Pro Ile Asn Leu
385 390 395 400

Arg Glu Gly Glu Pro Asp Leu Ser Asn Asn Phe Gly Lys Leu Phe Glu
405 410 415

Val Lys Pro Asp Lys Lys Asn Pro Gln Leu Gln Asp Leu Asp Met Met
420 425 430

Leu Thr Cys Val Glu Ile Lys Glu Gly Ala Leu Met Leu Pro His Phe
435 440 445

Asn Ser Lys Ala Met Val Ile Val Val Val Asn Lys Gly Thr Gly Asn
450 455 460

[illegible]
465 470 475

[illegible]

Pro Ala Ala His Pro Val Ala Ile Asn Ala Ser Ser Glu Leu His Leu
515 520 525

Leu Gly Phe Gly Ile Asn Ala Glu Asn Asn His Arg Ile Phe Leu Ala
530 535 540

Gly Asp Lys Asp Asn Val Ile Asp Gln Ile Glu Lys Gln Ala Lys Asp
545 550 555 560

Leu Ala Phe Pro Gly Ser Gly Glu Gln Val Glu Lys Leu Ile Lys Asn
565 570 575

Gln Lys Glu Ser His Phe Val Ser Ala Arg Pro Gln Ser Gln Ser Gln
580 585 590

Ser Pro Ser Ser Pro Glu Lys Glu Ser Pro Glu Lys Glu Asp Gln Glu
595 600 605

Glu Glu Asn Gln Gly Gly Lys Gly Pro Leu Leu Ser Ile Leu Lys Ala
610 615 620

Phe Asn
625

<210> 96
<211> 392
<212> PRT
<213> Ambrosia artemisiifolia

<400> 96

Met Gly Ile Lys His Cys Cys Tyr Ile Leu Tyr Phe Thr Leu Ala Leu
1 5 10 15

Val Thr Leu Leu Gln Pro Val Arg Ser Ala Glu Asp Leu Gln Gln Ile
20 25 30

Leu Pro Ser Ala Asn Glu Thr Arg Ser Leu Thr Thr Cys Gly Thr Tyr
35 40 45

Asn Ile Ile Asp Gly Cys Trp Arg Gly Lys Ala Asp Trp Ala Glu Asn
50 55 60

Arg Lys Ala Leu Ala Asp Cys Ala Gln Gly Phe Ala Lys Gly Thr Ile
65 70 75 80

Gly Gly Lys Asp Gly Asp Ile Tyr Thr Val Thr Ser Glu Leu Asp Asp
85 90 95

Asp Val Ala Asn Pro Lys Glu Gly Thr Leu Arg Phe Gly Ala Ala Gln

Asp Arg Pro Leu Trp Ile Ile Phe Asn Arg Asp Met Val Ile Arg Leu
130 135 140

Asn Ile Ile Ile His Asn Ile Ile Met His Asp Ile Val Val Asn Pro
165 170 175

Gly Gly Leu Ile Lys Ser His Asp Gly Pro Pro Val Pro Arg Lys Gly
180 185 190

Ser Asp Gly Asp Ala Ile Gly Ile Ser Gly Gly Ser Gln Ile Trp Ile
195 200 205

Asp His Cys Ser Leu Ser Lys Ala Val Asp Gly Leu Ile Asp Ala Lys
210 215 220

His Gly Ser Thr His Phe Thr Val Ser Asn Cys Leu Phe Thr Gln His
225 230 235 240

Gln Tyr Leu Leu Leu Phe Trp Asp Phe Asp Glu Arg Gly Met Leu Cys
245 250 255

Thr Val Ala Phe Asn Lys Phe Thr Asp Asn Val Asp Gln Arg Met Pro
260 265 270

Asn Leu Arg His Gly Phe Val Gln Val Val Asn Asn Asn Tyr Glu Arg
275 280 285

Trp Gly Ser Tyr Ala Leu Gly Gly Ser Ala Gly Pro Thr Ile Leu Ser
290 295 300

Gln Gly Asn Arg Phe Leu Ala Ser Asp Ile Lys Lys Glu Val Val Gly
305 310 315 320

Arg Tyr Gly Glu Ser Ala Met Ser Glu Ser Ile Asn Trp Asn Trp Arg
325 330 335

Ser Tyr Met Asp Val Phe Glu Asn Gly Ala Ile Phe Val Pro Ser Gly
340 345 350

Val Asp Pro Val Leu Thr Pro Glu Gln Asn Ala Gly Met Ile Pro Ala
355 360 365

Glu Pro Gly Glu Ala Val Leu Arg Leu Thr Ser Ser Ala Gly Val Leu
370 375 380

Ser Cys Gln Pro Gly Ala Pro Cys
385 390

<210> 97
<211> 397
<212> PRT
<213> Ambrosia artemisiifolia

[illegible]

Asn Ile Ile Asp Lys Cys Trp Arg Cys Lys Pro Asp Trp Ala Glu Asn
50 55 60

Arg Gln Ala Leu Gly Asn Cys Ala Gln Gly Phe Gly Lys Ala Thr His
65 70 75 80

Gly Gly Lys Trp Gly Asp Ile Tyr Met Val Thr Ser Asp Gln Asp Asp
85 90 95

Asp Val Val Asn Pro Lys Glu Gly Thr Leu Arg Phe Gly Ala Thr Gln
100 105 110

Asp Arg Pro Leu Trp Ile Ile Phe Gln Arg Asp Met Ile Ile Tyr Leu
115 120 125

Gln Gln Glu Met Val Val Thr Ser Asp Lys Thr Ile Asp Gly Arg Gly
130 135 140

Ala Lys Val Glu Leu Val Tyr Gly Gly Ile Thr Leu Met Asn Val Lys
145 150 155 160

Asn Val Ile Ile His Asn Ile Asp Ile His Asp Val Arg Val Leu Pro
165 170 175

Gly Gly Arg Ile Lys Ser Asn Gly Gly Pro Ala Ile Pro Arg His Gln
180 185 190

Ser Asp Gly Asp Ala Ile His Val Thr Gly Ser Ser Asp Ile Trp Ile
195 200 205

Asp His Cys Thr Leu Ser Lys Ser Phe Asp Gly Leu Val Asp Val Asn
210 215 220

Trp Gly Ser Thr Gly Val Thr Ile Ser Asn Cys Lys Phe Thr His His
225 230 235 240

Glu Lys Ala Val Leu Leu Gly Ala Ser Asp Thr His Phe Gln Asp Leu
245 250 255

Lys Met His Val Thr Leu Ala Tyr Asn Ile Phe Thr Asn Thr Val His
260 265 270

Glu Arg Met Pro Arg Cys Arg Phe Gly Phe Phe Gln Ile Val Asn Asn
275 280 285

Phe Tyr Asp Arg Trp Asp Lys Tyr Ala Ile Gly Gly Ser Ser Asn Pro
290 295 300

Thr Ile Leu Ser Gln Gly Asn Lys Phe Val Ala Pro Asp Phe Ile Tyr
305 310 315 320

Phe Val Ala Ser Gly Ser Asp Pro Val Leu Thr Ala Glu Gln Asn Ala

Gly Met Met Gln Ala Glu Pro Gly Asp Met Val Pro Gln Leu Thr Met
370 375 380

Asn Ala Gly Val Leu Thr Cys Ser Pro Gly Ala Pro Cys
385 390 395

<210> 98
<211> 397
<212> PRT
<213> Ambrosia artemisiifolia

<400> 98

Met Gly Ile Lys Gln Cys Cys Tyr Ile Leu Tyr Phe Thr Leu Ala Leu
1 5 10 15

Val Ala Leu Leu Gln Pro Val Arg Ser Ala Glu Gly Val Gly Glu Ile
20 25 30

Leu Pro Ser Val Asn Glu Thr Arg Ser Leu Gln Ala Cys Glu Ala Leu
35 40 45

Asn Ile Ile Asp Lys Cys Trp Arg Gly Lys Ala Asp Trp Glu Asn Asn
50 55 60

Arg Gln Ala Leu Ala Asp Cys Ala Gln Gly Phe Ala Lys Gly Thr Tyr
65 70 75 80

Gly Gly Lys Trp Gly Asp Val Tyr Thr Val Thr Ser Asn Leu Asp Asp
85 90 95

Asp Val Ala Asn Pro Lys Glu Gly Thr Leu Arg Phe Ala Ala Ala Gln
100 105 110

Asn Arg Pro Leu Trp Ile Ile Phe Lys Asn Asp Met Val Ile Asn Leu
115 120 125

Asn Gln Glu Leu Val Val Asn Ser Asp Lys Thr Ile Asp Gly Arg Gly
130 135 140

Val Lys Val Glu Ile Ile Asn Gly Gly Leu Thr Leu Met Asn Val Lys
145 150 155 160

Asn Ile Ile Ile His Asn Ile Asn Ile His Asp Val Lys Val Leu Pro
165 170 175

Gly Gly Met Ile Lys Ser Asn Asp Gly Pro Pro Ile Leu Arg Gln Ala
180 185 190

Ser Asp Gly Asp Thr Ile Asn Val Ala Gly Ser Ser Gln Ile Trp Ile
195 200 205

Ser Lys Ala Ile Leu Leu Gly Ala Asp Asp Thr His Val Gln Asp Lys

Gly Met Leu Ala Thr Val Ala Phe Asn Met Phe Thr Asp Asn Val Asp
260 265 270

Gln Arg Met Pro Arg Cys Arg Phe Gly Phe Phe Gln Val Val Asn Asn
275 280 285

Asn Tyr Asp Arg Trp Gly Thr Tyr Ala Ile Gly Gly Ser Ser Ala Pro
290 295 300

Thr Ile Leu Cys Gln Gly Asn Arg Phe Leu Ala Pro Asp Asp Gln Ile
305 310 315 320

Lys Lys Asn Val Leu Ala Arg Thr Gly Thr Gly Ala Ala Glu Ser Met
325 330 335

Ala Trp Asn Trp Arg Ser Asp Lys Asp Leu Leu Glu Asn Gly Ala Ile
340 345 350

Phe Val Thr Ser Gly Ser Asp Pro Val Leu Thr Pro Val Gln Ser Ala
355 360 365

Gly Met Ile Pro Ala Glu Pro Gly Glu Ala Ala Ile Lys Leu Thr Ser
370 375 380

Ser Ala Gly Val Phe Ser Cys His Pro Gly Ala Pro Cys
385 390 395

<210> 99
<211> 398
<212> PRT
<213> Ambrosia artemisiifolia

<400> 99

Met Gly Ile Lys His Cys Cys Tyr Ile Leu Tyr Phe Thr Leu Ala Leu
1 5 10 15

Val Thr Leu Leu Gln Pro Val Arg Ser Ala Glu Asp Val Glu Glu Phe
20 25 30

Leu Pro Ser Ala Asn Glu Thr Arg Arg Ser Leu Lys Ala Cys Glu Ala
35 40 45

His Asn Ile Ile Asp Lys Cys Trp Arg Cys Lys Ala Asp Trp Ala Asn
50 55 60

Asn Arg Gln Ala Leu Ala Asp Cys Ala Gln Gly Phe Ala Lys Gly Thr
65 70 75 80

Tyr Gly Gly Lys His Gly Asp Val Tyr Thr Val Thr Ser Asp Lys Asp
85 90 95

Leu Asn Gln Glu Leu Val Val Asn Ser Asp Lys Thr Ile Asp Gly Arg

Gly Val Lys Val Asn Ile Val Asn Ala Gly Leu Thr Leu Met Asn Val
145 150 155 160

Lys Asn Ile Ile Ile His Asn Ile Asn Ile His Asp Ile Lys Val Cys
165 170 175

Pro Gly Gly Met Ile Lys Ser Asn Asp Gly Pro Pro Ile Leu Arg Gln
180 185 190

Gln Ser Asp Gly Asp Ala Ile Asn Val Ala Gly Ser Ser Gln Ile Trp
195 200 205

Ile Asp His Cys Ser Leu Ser Lys Ala Ser Asp Gly Leu Leu Asp Ile
210 215 220

Thr Leu Gly Ser Ser His Val Thr Val Ser Asn Cys Lys Phe Thr Gln
225 230 235 240

His Gln Phe Val Leu Leu Leu Gly Ala Asp Asp Thr His Tyr Gln Asp
245 250 255

Lys Gly Met Leu Ala Thr Val Ala Phe Asn Met Phe Thr Asp His Val
260 265 270

Asp Gln Arg Met Pro Arg Cys Arg Phe Gly Phe Phe Gln Val Val Asn
275 280 285

Asn Asn Tyr Asp Arg Trp Gly Thr Tyr Ala Ile Gly Gly Ser Ser Ala
290 295 300

Pro Thr Ile Leu Ser Gln Gly Asn Arg Phe Phe Ala Pro Asp Asp Ile
305 310 315 320

Ile Lys Lys Asn Val Leu Ala Arg Thr Gly Thr Gly Asn Ala Glu Ser
325 330 335

Met Ser Trp Asn Trp Arg Thr Asp Arg Asp Leu Leu Glu Asn Gly Ala
340 345 350

Ile Phe Leu Pro Ser Gly Ser Asp Pro Val Leu Thr Pro Glu Gln Lys
355 360 365

Asn Gly Met Ile Pro Ala Glu Pro Gly Gln Ala Val Leu Arg Leu Thr
370 375 380

Ser Ser Ala Gly Val Leu Ser Cys His Gln Gly Ala Pro Cys
385 390 395

<210> 100
<211> 396
<212> PRT
<213> [illegible]

Val Thr Leu Leu Gln Pro Val Arg Ser Ala Glu Asp Leu Gln Glu Ile

Leu Pro Val Asn Glu Thr Arg Arg Leu Thr Thr Ser Gly Ala Tyr Asn
35 40 45

Ile Ile Asp Gly Cys Trp Arg Gly Lys Ala Asp Trp Ala Glu Asn Arg
50 55 60

Lys Ala Leu Ala Asp Cys Ala Gln Gly Phe Gly Lys Gly Thr Val Gly
65 70 75 80

Gly Lys Asp Gly Asp Ile Tyr Thr Val Thr Ser Glu Leu Asp Asp Asp
85 90 95

Val Ala Asn Pro Lys Glu Gly Thr Leu Arg Phe Gly Ala Ala Gln Asn
100 105 110

Arg Pro Leu Trp Ile Ile Phe Glu Arg Asp Met Val Ile Arg Leu Asp
115 120 125

Lys Glu Met Val Val Asn Ser Asp Lys Thr Ile Asp Gly Arg Gly Ala
130 135 140

Lys Val Glu Ile Ile Asn Ala Gly Phe Thr Leu Asn Gly Val Lys Asn
145 150 155 160

Val Ile Ile His Asn Ile Asn Met His Asp Val Lys Val Asn Pro Gly
165 170 175

Gly Leu Ile Lys Ser Asn Asp Gly Pro Ala Ala Pro Arg Ala Gly Ser
180 185 190

Asp Gly Asp Ala Ile Ser Ile Ser Gly Ser Ser Gln Ile Trp Ile Asp
195 200 205

His Cys Ser Leu Ser Lys Ser Val Asp Gly Leu Val Asp Ala Lys Leu
210 215 220

Gly Thr Thr Arg Leu Thr Val Ser Asn Ser Leu Phe Thr Gln His Gln
225 230 235 240

Phe Val Leu Leu Phe Gly Ala Gly Asp Glu Asn Ile Glu Asp Arg Gly
245 250 255

Met Leu Ala Thr Val Ala Phe Asn Thr Phe Thr Asp Asn Val Asp Gln
260 265 270

Arg Met Pro Arg Cys Arg His Gly Phe Phe Gln Val Val Asn Asn Asn
275 280 285

Tyr Asp Lys Trp Gly Ser Tyr Ala Ile Gly Gly Ser Ala Ser Pro Thr
290 295 300

Trp Asn Trp Arg Thr Asn Lys Asp Val Leu Gln Asn Gly Ala Ile Phe
340 345 350

355 360 365

Met Ile Pro Ala Glu Pro Gly Glu Ser Ala Leu Ser Leu Thr Ser Ser
370 375 380

Ala Gly Val Leu Ser Cys Gln Pro Gly Ala Pro Cys
385 390 395

<210> 101
<211> 373
<212> PRT
<213> Cryptomeria japonica

<400> 101

Met Asp Ser Pro Cys Leu Val Ala Leu Leu Val Phe Ser Phe Val Ile
1 5 10 15

Gly Ser Cys Phe Ser Asp Asn Pro Ile Asp Ser Cys Trp Arg Gly Asp
20 25 30

Ser Asn Trp Ala Gln Asn Arg Met Lys Leu Ala Asp Cys Ala Val Gly
35 40 45

Phe Gly Ser Ser Thr Met Gly Gly Lys Gly Gly Asp Leu Tyr Thr Val
50 55 60

Thr Asn Ser Asp Asp Asp Pro Val Asn Pro Pro Gly Thr Leu Arg Tyr
65 70 75 80

Gly Ala Thr Arg Asp Arg Pro Leu Trp Ile Ile Phe Ser Gly Asn Met
85 90 95

Asn Ile Lys Leu Lys Met Pro Met Tyr Ile Ala Gly Tyr Lys Thr Phe
100 105 110

Asp Gly Arg Gly Ala Gln Val Tyr Ile Gly Asn Gly Gly Pro Cys Val
115 120 125

Phe Ile Lys Arg Val Ser Asn Val Ile Ile His Gly Leu Tyr Leu Tyr
130 135 140

Gly Cys Ser Thr Ser Val Leu Gly Asn Val Leu Ile Asn Glu Ser Phe
145 150 155 160

Gly Val Glu Pro Val His Pro Gln Asp Gly Asp Ala Leu Thr Leu Arg
165 170 175

Thr Ala Thr Asn Ile Trp Ile Asp His Asn Ser Phe Ser Asn Ser Ser
180 185 190

Asp Ala Tyr Asp Asp Asp Lys Ser Met Lys Val Thr Val Ala Phe Asn
225 230 235 240

245 250 255

Leu Val His Val Ala Asn Asn Asn Tyr Asp Pro Trp Thr Ile Tyr Ala
260 265 270

Ile Gly Gly Ser Ser Asn Pro Thr Ile Leu Ser Glu Gly Asn Ser Phe
275 280 285

Thr Ala Pro Asn Glu Ser Tyr Lys Lys Gln Val Thr Ile Arg Ile Gly
290 295 300

Cys Lys Thr Ser Ser Ser Cys Ser Asn Trp Val Trp Gln Ser Thr Gln
305 310 315 320

Asp Val Phe Tyr Asn Gly Ala Tyr Phe Val Ser Ser Gly Lys Tyr Glu
325 330 335

Gly Gly Asn Ile Tyr Thr Lys Lys Glu Ala Phe Asn Val Glu Asn Gly
340 345 350

Asn Ala Thr Pro His Leu Thr Gln Asn Ala Gly Val Leu Thr Cys Ser
355 360 365

Leu Ser Lys Arg Cys
370

<210> 102
<211> 374
<212> PRT
<213> Cryptomeria japonica

<400> 102

Met Asp Ser Pro Cys Leu Val Ala Leu Leu Val Leu Ser Phe Val Ile
1 5 10 15

Gly Ser Cys Phe Ser Asp Asn Pro Ile Asp Ser Cys Trp Arg Gly Asp
20 25 30

Ser Asn Trp Ala Gln Asn Arg Met Lys Leu Ala Asp Cys Ala Val Gly
35 40 45

Phe Gly Ser Ser Thr Met Gly Gly Lys Gly Gly Asp Leu Tyr Thr Val
50 55 60

Thr Asn Ser Asp Asp Asp Pro Val Asn Pro Ala Pro Gly Thr Leu Arg
65 70 75 80

Tyr Gly Ala Thr Arg Asp Arg Pro Leu Trp Ile Ile Phe Ser Gly Asn
85 90 95

Val Phe Ile Lys Arg Val Ser Asn Val Ile Ile His Gly Leu His Leu
130 135 140

145 150 155 160

Phe Gly Val Glu Pro Val His Pro Gln Asp Gly Asp Ala Leu Thr Leu
165 170 175

Arg Thr Ala Thr Asn Ile Trp Ile Asp His Asn Ser Phe Ser Asn Ser
180 185 190

Ser Asp Gly Leu Val Asp Val Thr Leu Ser Ser Thr Gly Val Thr Ile
195 200 205

Ser Asn Asn Leu Phe Phe Asn His His Lys Val Met Leu Leu Gly His
210 215 220

Asp Asp Ala Tyr Ser Asp Asp Lys Ser Met Lys Val Thr Val Ala Phe
225 230 235 240

Asn Gln Phe Gly Pro Asn Cys Gly Gln Arg Met Pro Arg Ala Arg Tyr
245 250 255

Gly Leu Val His Val Ala Asn Asn Asn Tyr Asp Pro Trp Thr Ile Tyr
260 265 270

Ala Ile Gly Gly Ser Ser Asn Pro Thr Ile Leu Ser Glu Gly Asn Ser
275 280 285

Phe Thr Ala Pro Asn Glu Ser Tyr Lys Lys Gln Val Thr Ile Arg Ile
290 295 300

Gly Cys Lys Thr Ser Ser Ser Cys Ser Asn Trp Val Trp Gln Ser Thr
305 310 315 320

Gln Asp Val Phe Tyr Asn Gly Ala Tyr Phe Val Ser Ser Gly Lys Tyr
325 330 335

Glu Gly Gly Asn Ile Tyr Thr Lys Lys Glu Ala Phe Asn Val Glu Asn
340 345 350

Gly Asn Ala Thr Pro Gln Leu Thr Lys Asn Ala Gly Val Leu Thr Cys
355 360 365

Ser Leu Ser Lys Arg Cys
370

<210> 113
<211> 514
<212> PRT
<213> Cryptomeria japonica

<400> 113

Ser Val Val Glu Lys Tyr Leu Arg Ser Asn Arg Ser Leu Arg Lys Val
35 40 45

50 55 60

Gly Ala Val Gly Asp Gly Lys His Asp Cys Thr Glu Ala Phe Ser Thr
65 70 75 80

Ala Trp Gln Ala Ala Cys Lys Asn Pro Ser Ala Met Leu Leu Val Pro
85 90 95

Gly Ser Lys Lys Phe Val Val Asn Asn Leu Phe Phe Asn Gly Pro Cys
100 105 110

Gln Pro His Phe Thr Phe Lys Val Asp Gly Ile Ile Ala Ala Tyr Gln
115 120 125

Asn Pro Ala Ser Trp Lys Asn Asn Arg Ile Trp Leu Gln Phe Ala Lys
130 135 140

Leu Thr Gly Phe Thr Leu Met Gly Lys Gly Val Ile Asp Gly Gln Gly
145 150 155 160

Lys Gln Trp Trp Ala Gly Gln Cys Lys Trp Val Asn Gly Arg Glu Ile
165 170 175

Cys Asn Asp Arg Asp Arg Pro Thr Ala Ile Lys Phe Asp Phe Ser Thr
180 185 190

Gly Leu Ile Ile Gln Gly Leu Lys Leu Met Asn Ser Pro Glu Phe His
195 200 205

Leu Val Phe Gly Asn Cys Glu Gly Val Lys Ile Ile Gly Ile Ser Ile
210 215 220

Thr Ala Pro Arg Asp Ser Pro Asn Thr Asp Gly Ile Asp Ile Phe Ala
225 230 235 240

Ser Lys Asn Phe His Leu Gln Lys Asn Thr Ile Gly Thr Gly Asp Asp
245 250 255

Cys Val Ala Ile Gly Thr Gly Ser Ser Asn Ile Val Ile Glu Asp Leu
260 265 270

Ile Cys Gly Pro Gly His Gly Ile Ser Ile Gly Ser Leu Gly Arg Glu
275 280 285

Asn Ser Arg Ala Glu Val Ser Tyr Val His Val Asn Gly Ala Lys Phe
290 295 300

Ile Asp Thr Gln Asn Gly Leu Arg Ile Lys Thr Trp Gln Gly Gly Ser
305 310 315 320

Gly Met Ala Ser His Ile Ile Tyr Glu Asn Val Glu Met Ile Asn Ser

[illegible]

[illegible]

Ser Asp Ser Met Pro Cys Lys Asp Ile Lys Leu Ser Asp Ile Ser Leu
385 390 395 400

Lys Leu Thr Ser Gly Lys Ile Ala Ser Cys Leu Asn Asp Asn Ala Asn
405 410 415

Gly Tyr Phe Ser Gly His Val Ile Pro Ala Cys Lys Asn Leu Ser Pro
420 425 430

Ser Ala Lys Arg Lys Glu Ser Lys Ser His Lys His Pro Lys Thr Val
435 440 445

Met Val Glu Asn Met Arg Ala Tyr Asp Lys Gly Asn Arg Thr Arg Ile
450 455 460

Leu Leu Gly Ser Arg Pro Pro Asn Cys Thr Asn Lys Cys His Gly Cys
465 470 475 480

Ser Pro Cys Lys Ala Lys Leu Val Ile Val His Arg Ile Met Pro Gln
485 490 495

Glu Tyr Tyr Pro Gln Arg Trp Ile Cys Ser Cys His Gly Lys Ile Tyr
500 505 510

His Pro

<210> 104
<211> 514
<212> PRT
<213> Cryptomeria japonica

<400> 104

Met Ala Met Lys Phe Ile Ala Pro Met Ala Phe Val Ala Met Gln Leu
1 5 10 15

Ile Ile Met Ala Ala Ala Glu Asp Gln Ser Ala Gln Ile Met Leu Asp
20 25 30

Ser Asp Ile Glu Gln Tyr Leu Arg Ser Asn Arg Ser Leu Arg Lys Val
35 40 45

Glu His Ser Arg His Asp Ala Ile Asn Ile Phe Asn Val Glu Lys Tyr
50 55 60

Gly Ala Val Gly Asp Gly Lys His Asp Cys Thr Glu Ala Phe Ser Thr
65 70 75 80

Ala Trp Gln Ala Ala Cys Lys Lys Pro Ser Ala Met Leu Leu Val Pro

[illegible] [illegible] His [illegible] [illegible] [illegible] Lys Val Asp [illegible] Ile [illegible] Ala Ala Tyr Gln
115 120 125

Leu Thr Gly Phe Thr Leu Met Gly Lys Gly Val Ile Asp Gly Gln Gly
145 150 155 160

Lys Gln Trp Trp Ala Gly Gln Cys Lys Trp Val Asn Gly Arg Glu Ile
165 170 175

Cys Asn Asp Arg Asp Arg Pro Thr Ala Ile Lys Phe Asp Phe Ser Thr
180 185 190

Gly Leu Ile Ile Gln Gly Leu Lys Leu Met Asn Ser Pro Glu Phe His
195 200 205

Leu Val Phe Gly Asn Cys Glu Gly Val Lys Ile Ile Gly Ile Ser Ile
210 215 220

Thr Ala Pro Arg Asp Ser Pro Asn Thr Asp Gly Ile Asp Ile Phe Ala
225 230 235 240

Ser Lys Asn Phe His Leu Gln Lys Asn Thr Ile Gly Thr Gly Asp Asp
245 250 255

Cys Val Ala Ile Gly Thr Gly Ser Ser Asn Ile Val Ile Glu Asp Leu
260 265 270

Ile Cys Gly Pro Gly His Gly Ile Ser Ile Gly Ser Leu Gly Arg Glu
275 280 285

Asn Ser Arg Ala Glu Val Ser Tyr Val His Val Asn Gly Ala Lys Phe
290 295 300

Ile Asp Thr Gln Asn Gly Leu Arg Ile Lys Thr Trp Gln Gly Gly Ser
305 310 315 320

Gly Met Ala Ser His Ile Ile Tyr Glu Asn Val Glu Met Ile Asn Ser
325 330 335

Glu Asn Pro Ile Leu Ile Asn Gln Phe Tyr Cys Thr Ser Ala Ser Ala
340 345 350

Cys Gln Asn Gln Arg Ser Ala Val Gln Ile Gln Asp Val Thr Tyr Lys
355 360 365

Asn Ile Arg Gly Thr Ser Ala Thr Ala Ala Ala Ile Gln Leu Lys Cys
370 375 380

Ser Asp Ser Met Pro Cys Lys Asp Ile Lys Leu Ser Asp Ile Ser Leu
385 390 395 400

Lys Leu Thr Ser Gly Lys Ile Ala Ser Cys Leu Asn Asp Asn Ala Asn
405 410 415

Met Val Lys Asn Met Gly Ala Tyr Asp Lys Gly Asn Arg Thr Arg Ile

Leu Leu Gly Ser Arg Pro Pro Asn Cys Thr Asn Lys Cys His Gly Cys
465 470 475 480

Ser Pro Cys Lys Ala Lys Leu Val Ile Val His Arg Ile Met Pro Gln
485 490 495

Glu Tyr Tyr Pro Gln Arg Trp Met Cys Ser Arg His Gly Lys Ile Tyr
500 505 510

His Pro

<210> 105
<211> 373
<212> PRT
<213> Cryptomeria japonica

<400> 105

Met Asp Ser Pro Cys Leu Val Ala Leu Leu Val Leu Ser Phe Val Ile
1 5 10 15

Gly Ser Cys Phe Ser Asp Asn Pro Ile Asp Ser Cys Trp Arg Gly Asp
20 25 30

Ser Asn Trp Ala Gln Asn Arg Met Lys Leu Ala Asp Cys Ala Val Gly
35 40 45

Phe Gly Ser Ser Thr Met Gly Gly Lys Gly Gly Asp Leu Tyr Thr Val
50 55 60

Thr Asn Ser Asp Asp Asp Pro Val Asn Pro Pro Gly Thr Leu Arg Tyr
65 70 75 80

Gly Ala Thr Arg Asp Arg Pro Leu Trp Ile Ile Phe Ser Gly Asn Met
85 90 95

Asn Ile Lys Leu Lys Met Pro Met Tyr Ile Ala Gly Tyr Lys Thr Phe
100 105 110

Asp Gly Arg Gly Ala Gln Val Tyr Ile Gly Asn Gly Gly Pro Cys Val
115 120 125

Phe Ile Lys Arg Val Ser Asn Val Ile Ile His Gly Leu His Leu Tyr
130 135 140

Gly Cys Ser Thr Ser Val Leu Gly Asn Val Leu Ile Asn Glu Ser Phe
145 150 155 160

Gly Val Glu Pro Val His Pro Gln Asp Gly Asp Ala Leu Thr Leu Arg
165 170 175

Asn Asn Leu Phe Phe Asn His His Lys Val Met Leu Leu Gly His Asp

Asp Ala Tyr Ser Asp Asp Lys Ser Met Lys Val Thr Val Ala Phe Asn
225 230 235 240

Gln Phe Gly Pro Asn Cys Gly Gln Arg Met Pro Arg Ala Arg Tyr Gly
245 250 255

Leu Val His Val Ala Asn Asn Asn Tyr Asp Pro Trp Thr Ile Tyr Ala
260 265 270

Ile Gly Gly Ser Ser Asn Pro Thr Ile Leu Ser Glu Gly Asn Ser Phe
275 280 285

Thr Ala Pro Asn Glu Ser Tyr Lys Lys Gln Val Thr Ile Arg Ile Gly
290 295 300

Cys Lys Thr Ser Ser Ser Cys Ser Asn Trp Val Trp Gln Ser Thr Gln
305 310 315 320

Asp Val Phe Tyr Asn Gly Ala Tyr Phe Val Ser Ser Gly Lys Tyr Glu
325 330 335

Gly Gly Asn Ile Tyr Thr Lys Lys Glu Ala Phe Asn Val Glu Asn Gly
340 345 350

Asn Ala Thr Pro Gln Leu Thr Lys Asn Ala Gly Val Leu Thr Cys Ser
355 360 365

Leu Ser Lys Arg Cys
370

<210> 106
<211> 374
<212> PRT
<213> Cryptomeria japonica

<400> 106

Met Asp Ser Pro Cys Leu Val Ala Leu Leu Val Phe Ser Phe Val Ile
1 5 10 15

Gly Ser Cys Phe Ser Asp Asn Pro Ile Asp Ser Cys Trp Arg Gly Asp
20 25 30

Ser Asn Trp Ala Gln Asn Arg Met Lys Leu Ala Asp Cys Ala Val Gly
35 40 45

Phe Gly Ser Ser Thr Met Gly Gly Lys Gly Gly Asp Leu Tyr Thr Val
50 55 60

Thr Asn Ser Asp Asp Asp Pro Val Asn Pro Ala Pro Gly Thr Leu Arg
65 70 75 80

Phe Asp Gly Arg Gly Ala Gln Val Tyr Ile Gly Asn Gly Gly Pro Cys

Val Phe Ile Lys Arg Val Ser Asn Val Ile Ile His Gly Leu Tyr Leu
130 135 140

Tyr Gly Cys Ser Thr Ser Val Leu Gly Asn Val Leu Ile Asn Glu Ser
145 150 155 160

Phe Gly Val Glu Pro Val His Pro Gln Asp Gly Asp Ala Leu Thr Leu
165 170 175

Arg Thr Ala Thr Asn Ile Trp Ile Asp His Asn Ser Phe Ser Asn Ser
180 185 190

Ser Asp Gly Leu Val Asp Val Thr Leu Thr Ser Thr Gly Val Thr Ile
195 200 205

Ser Asn Asn Leu Phe Phe Asn His His Lys Val Met Ser Leu Gly His
210 215 220

Asp Asp Ala Tyr Ser Asp Asp Lys Ser Met Lys Val Thr Val Ala Phe
225 230 235 240

Asn Gln Phe Gly Pro Asn Cys Gly Gln Arg Met Pro Arg Ala Arg Tyr
245 250 255

Gly Leu Val His Val Ala Asn Asn Asn Tyr Asp Pro Trp Thr Ile Tyr
260 265 270

Ala Ile Gly Gly Ser Ser Asn Pro Thr Ile Leu Ser Glu Gly Asn Ser
275 280 285

Phe Thr Ala Pro Asn Glu Ser Tyr Lys Lys Gln Val Thr Ile Arg Ile
290 295 300

Gly Cys Lys Thr Ser Ser Ser Cys Ser Asn Trp Val Trp Gln Ser Thr
305 310 315 320

Gln Asp Val Phe Tyr Asn Gly Ala Tyr Phe Val Ser Ser Gly Lys Tyr
325 330 335

Glu Gly Gly Asn Ile Tyr Thr Lys Lys Glu Ala Phe Asn Val Glu Asn
340 345 350

Gly Asn Ala Thr Pro His Leu Thr Gln Asn Ala Gly Val Leu Thr Cys
355 360 365

Ser Leu Ser Lys Arg Cys
370

<210> 107
<211> 174
<212> PRT

Gln Ala Gln Asp Thr Pro Ala Leu Gly Lys Asp Thr Val Ala Val Ser

Gly Lys Trp Tyr Leu Lys Ala Met Thr Ala Asp Gln Glu Val Pro Glu
35 40 45

Lys Pro Asp Ser Val Thr Pro Met Ile Leu Lys Ala Gln Lys Gly Gly
50 55 60

Asn Leu Glu Ala Lys Ile Thr Met Leu Thr Asn Gly Gln Cys Gln Asn
65 70 75 80

Ile Thr Val Val Leu His Lys Thr Ser Glu Pro Gly Lys Tyr Thr Ala
85 90 95

Tyr Glu Gly Gln Arg Val Val Phe Ile Gln Pro Ser Pro Val Arg Asp
100 105 110

His Tyr Ile Leu Tyr Cys Glu Gly Glu Leu His Gly Arg Gln Ile Arg
115 120 125

Met Ala Lys Leu Leu Gly Arg Asp Pro Glu Gln Ser Gln Glu Ala Leu
130 135 140

Glu Asp Phe Arg Glu Phe Ser Arg Ala Lys Gly Leu Asn Gln Glu Ile
145 150 155 160

Leu Glu Leu Ala Gln Ser Glu Thr Cys Ser Pro Gly Gly Gln
165 170

<210> 108
<211> 24
<212> PRT
<213> Canis familiaris

<400> 108

Glu Ala Tyr Lys Ser Glu Ile Ala His Arg Tyr Asn Asp Leu Gly Glu
1 5 10 15

Glu His Phe Arg Gly Leu Val Leu
20

<210> 109
<211> 265
<212> PRT
<213> Canis familiaris

<400> 109

Leu Ser Ser Ala Lys Glu Arg Phe Lys Cys Ala Ser Leu Gln Lys Phe
1 5 10 15

Gly Asp Arg Ala Phe Lys Ala Trp Ser Val Ala Arg Leu Ser Gln Arg

Ile Ser Thr Lys Leu Lys Glu Cys Cys Asp Lys Pro Val Leu Glu Lys
85 90 95

Ser Gln Cys Leu Ala Glu Val Glu Arg Asp Glu Leu Pro Gly Asp Leu
100 105 110

Pro Ser Leu Ala Ala Asp Phe Val Glu Asp Lys Glu Val Cys Lys Asn
115 120 125

Tyr Gln Glu Ala Lys Asp Val Phe Leu Gly Thr Phe Leu Tyr Glu Tyr
130 135 140

Ser Arg Arg His Pro Glu Tyr Ser Val Ser Leu Leu Leu Arg Leu Ala
145 150 155 160

Lys Glu Tyr Glu Ala Thr Leu Glu Lys Cys Cys Ala Thr Asp Asp Pro
165 170 175

Pro Thr Cys Tyr Ala Lys Val Leu Asp Glu Phe Lys Pro Leu Val Asp
180 185 190

Glu Pro Gln Asn Leu Val Lys Thr Asn Cys Glu Leu Phe Glu Lys Leu
195 200 205

Gly Glu Tyr Gly Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys
210 215 220

Ala Pro Gln Val Ser Thr Pro Thr Leu Val Val Glu Val Ser Arg Lys
225 230 235 240

Leu Gly Lys Val Gly Thr Lys Cys Cys Lys Lys Pro Glu Ser Glu Arg
245 250 255

Met Ser Cys Ala Asp Asp Phe Leu Ser
260 265

<210> 110
<211> 180
<212> PRT
<213> Canis familiaris

<400> 110

Met Gln Leu Leu Leu Leu Thr Val Gly Leu Ala Leu Ile Cys Gly Leu
1 5 10 15

Gln Ala Gln Glu Gly Asn His Glu Glu Pro Gln Gly Gly Leu Glu Glu
20 25 30

Leu Ser Gly Arg Trp His Ser Val Ala Leu Ala Ser Asn Lys Ser Asp

Lys Phe Asp Leu Glu Tyr Trp Gly His Asn Asp Leu Tyr Leu Ala Glu
100 105 110

Val Asp Pro Lys Ser Tyr Leu Ile Leu Tyr Met Ile Asn Gln Tyr Asn
115 120 125

Asp Asp Thr Ser Leu Val Ala His Leu Met Val Arg Asp Leu Ser Arg
130 135 140

Gln Gln Asp Phe Leu Pro Ala Phe Glu Ser Val Cys Glu Asp Ile Gly
145 150 155 160

Leu His Lys Asp Gln Ile Val Val Leu Ser Asp Asp Asp Arg Cys Gln
165 170 175

Gly Ser Arg Asp
180

<210> 111
<211> 187
<212> PRT
<213> Equus caballus

<400> 111

Met Lys Leu Leu Leu Leu Cys Leu Gly Leu Ile Leu Val Cys Ala Gln
1 5 10 15

Gln Glu Glu Asn Ser Asp Val Ala Ile Arg Asn Phe Asp Ile Ser Lys
20 25 30

Ile Ser Gly Glu Trp Tyr Ser Ile Phe Leu Ala Ser Asp Val Lys Glu
35 40 45

Lys Ile Glu Glu Asn Gly Ser Met Arg Val Phe Val Asp Val Ile Arg
50 55 60

Ala Leu Asp Asn Ser Ser Leu Tyr Ala Glu Tyr Gln Thr Lys Val Asn
65 70 75 80

Gly Glu Cys Thr Glu Phe Pro Met Val Phe Asp Lys Thr Glu Glu Asp
85 90 95

Gly Val Tyr Ser Leu Asn Tyr Asp Gly Tyr Asn Val Phe Arg Ile Ser
100 105 110

Glu Phe Glu Asn Asp Glu His Ile Ile Leu Tyr Leu Val Asn Phe Asp
115 120 125

Lys Asp Arg Pro Phe Gln Leu Phe Glu Phe Tyr Ala Arg Glu Pro Asp

Gly Leu Val Tyr Glu Asn Leu Ile Asp Ile Phe Thr Tyr Leu Asp Ala Tyr
165 170 175

<210> 112
<211> 29
<212> PRT
<213> Equus caballus

<220>
<221> misc_feature
<223> X is unknown amino acid

<400> 112

Ser Gln Xaa Pro Gln Ser Glu Thr Asp Tyr Ser Gln Leu Ser Gly Glu
1 5 10 15

Trp Asn Thr Ile Tyr Gly Ala Ala Ser Asn Ile Xaa Lys
20 25

<210> 113
<211> 211
<212> PRT
<213> Euroglyphus maynei

<400> 113

Thr Tyr Ala Cys Ser Ile Asn Ser Val Ser Leu Pro Ser Glu Leu Asp
1 5 10 15

Leu Arg Ser Leu Arg Thr Val Thr Pro Ile Arg Met Gln Gly Gly Cys
20 25 30

Gly Ser Cys Trp Ala Phe Ser Gly Val Ala Ser Thr Glu Ser Ala Tyr
35 40 45

Leu Ala Tyr Arg Asn Met Ser Leu Asp Leu Ala Glu Gln Glu Leu Val
50 55 60

Asp Cys Ala Ser Gln Asn Gly Cys His Gly Asp Thr Ile Pro Arg Gly
65 70 75 80

Ile Glu Tyr Ile Gln Gln Asn Gly Val Val Gln Glu His Tyr Tyr Pro
85 90 95

Tyr Val Ala Arg Glu Gln Ser Cys His Arg Pro Asn Ala Gln Arg Tyr
100 105 110

Gly Leu Lys Asn Tyr Cys Gln Ile Ser Pro Pro Asp Ser Asn Lys Ile
115 120 125

Arg Gln Ala Leu Thr Gln Thr His Thr Ala Val Ala Val Ile Ile Gly

[illegible]

Trp Asp Thr Thr Trp Gly Asp Asn Gly Tyr Gly Tyr Phe Ala Ala Asn
195 200 205

Ile Asn Leu
210

<210> 114
<211> 211
<212> PRT
<213> Euroglyphus maynei

<400> 114

Thr Tyr Ala Cys Ser Ile Asn Ser Val Ser Leu Pro Ser Glu Leu Asp
1 5 10 15

Leu Arg Ser Leu Arg Thr Val Thr Pro Ile Arg Met Gln Gly Gly Cys
20 25 30

Gly Ser Cys Trp Ala Phe Ser Gly Val Ala Ser Thr Glu Ser Ala Tyr
35 40 45

Leu Ala Tyr Arg Asn Met Ser Leu Asp Leu Ala Glu Gln Glu Leu Val
50 55 60

Asp Cys Ala Ser Gln Asn Gly Cys His Gly Asp Thr Ile Pro Arg Gly
65 70 75 80

Ile Glu Tyr Ile Gln Gln Asn Gly Val Val Gln Glu His Tyr Tyr Pro
85 90 95

Tyr Val Ala Arg Glu Gln Ser Cys His Arg Pro Asn Ala Gln Arg Tyr
100 105 110

Gly Leu Lys Asn Tyr Cys Gln Ile Ser Pro Pro Asp Ser Asn Lys Ile
115 120 125

Arg Gln Ala Leu Thr Gln Thr His Thr Ala Val Ala Val Ile Ile Gly
130 135 140

Ile Lys Asp Leu Asn Ala Phe Arg His Tyr Asp Gly Arg Thr Ile Met
145 150 155 160

Gln His Asp Asn Gly Tyr Gln Pro Asn Tyr His Ala Val Asn Ile Val
165 170 175

Gly Tyr Gly Asn Thr Gln Gly Val Asp Tyr Trp Ile Val Arg Asn Ser
180 185 190

Trp Asp Thr Thr Trp Gly Asp Asn Gly Tyr Gly Tyr Phe Ala Ala Asn

<210> 115
<211> 211
<212> PRT

<400> 115

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Glu Thr Asn Ala Cys Ser Ile Asn Gly Asn Ala Pro Ala Glu Ile Asp
1               5                  10                  15

Leu Arg Gln Met Arg Thr Val Thr Pro Ile Arg Met Gln Gly Gly Cys
            20                  25                  30

Gly Ser Cys Trp Ala Phe Ser Gly Val Ala Ala Thr Glu Ser Ala Tyr
        35                  40                  45

Leu Ala Tyr Arg Asn Gln Ser Leu Asp Leu Ala Glu Gln Glu Leu Val
    50                  55                  60

Asp Cys Ala Ser Gln His Gly Cys His Gly Asp Thr Ile Pro Arg Gly
65                  70                  75                  80

Ile Glu Tyr Ile Gln His Asn Gly Val Val Gln Glu Ser Tyr Tyr Arg
                85                  90                  95

Tyr Val Ala Arg Glu Gln Ser Cys Arg Arg Pro Asn Ala Gln Arg Phe
            100                 105                 110

Gly Ile Ser Asn Tyr Cys Gln Ile Tyr Pro Pro Asn Ala Asn Lys Ile
        115                 120                 125

Arg Glu Ala Leu Ala Gln Thr His Ser Ala Ile Ala Val Ile Ile Gly
    130                 135                 140

Ile Lys Asp Leu Asp Ala Phe Arg His Tyr Asp Gly Arg Thr Ile Ile
145                 150                 155                 160

Gln Arg Asp Asn Gly Tyr Gln Pro Asn Tyr His Ala Val Asn Ile Val
                165                 170                 175

Gly Tyr Ser Asn Ala Gln Gly Val Asp Tyr Trp Ile Val Arg Asn Ser
            180                 185                 190

Trp Asp Thr Asn Trp Gly Asp Asn Gly Tyr Gly Tyr Phe Ala Ala Asn
        195                 200                 205

Ile Asp Leu
    210
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<210> 116
<211> 212
<212> PRT
<213> Euroglyphus maynei

<400> 116

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Cys Gly Ser Cys Trp Ala His Ser Gly Val Ala Ala Thr His Ser Ala
        35                  40                  45
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50 55 60

Val Asp Cys Ala Ser Gln His Gly Cys His Gly Asp Thr Ile Pro Arg
65 70 75 80

Gly Ile Glu Tyr Ile Gln Gln Asn Gly Val Val Glu Glu Arg Ser Tyr
85 90 95

Pro Tyr Val Ala Arg Glu Gln Gln Cys Arg Arg Pro Asn Ser Gln His
100 105 110

Tyr Gly Ile Ser Asn Tyr Cys Gln Ile Tyr Pro Pro Asp Val Lys Gln
115 120 125

Ile Arg Glu Ala Leu Thr Gln Thr His Thr Ala Ile Ala Val Ile Ile
130 135 140

Gly Ile Lys Asp Leu Arg Ala Phe Gln His Tyr Asp Gly Arg Thr Ile
145 150 155 160

Ile Gln His Asp Asn Gly Tyr Gln Pro Asn Tyr His Ala Val Asn Ile
165 170 175

Val Gly Tyr Gly Ser Thr Gln Gly Val Asp Tyr Trp Ile Val Arg Asn
180 185 190

Ser Trp Asp Thr Thr Trp Gly Asp Ser Gly Tyr Gly Tyr Phe Gln Ala
195 200 205

Gly Asn Asn Leu
210

<210> 117
<211> 307
<212> PRT
<213> Poa pratensis

<400> 117

Met Ala Val Gln Lys Tyr Thr Val Ala Leu Phe Leu Val Ala Leu Val
1 5 10 15

Val Gly Pro Ala Ala Ser Tyr Ala Ala Arg Leu Ser Tyr Gly Ala Pro
20 25 30

Ala Thr Pro Ala Ala Pro Ala Ala Gly Tyr Thr Pro Ala Ala Pro Ala
35 40 45

Gly Ala Ala Pro Lys Ala Thr Thr Asp Glu Gln Lys Met Ile Glu Lys
50 55 60

[illegible]

Asn Lys Ala Leu Ala Ala Ala Arg Ser Thr [illegible] Lys Gly Ala Ala
100 105 110

115 120 125

Lys Leu Ala Tyr Lys Ser Ala Glu Gly Ala Thr Pro Glu Ala Lys Tyr
130 135 140

Asp Asp Tyr Val Ala Thr Leu Ser Glu Ala Leu Arg Ile Ile Ala Gly
145 150 155 160

Thr Leu Glu Val His Gly Val Lys Pro Ala Ala Glu Glu Val Lys Ala
165 170 175

Thr Pro Ala Gly Glu Leu Gln Val Ile Asp Lys Val Asp Ala Ala Phe
180 185 190

Lys Val Ala Ala Thr Ala Ala Asn Ala Ala Pro Ala Asn Asp Lys Phe
195 200 205

Thr Val Phe Glu Ala Ala Phe Asn Asp Ala Ile Lys Ala Ser Thr Gly
210 215 220

Gly Ala Tyr Gln Ser Tyr Lys Phe Ile Pro Ala Leu Glu Ala Ala Val
225 230 235 240

Lys Gln Ser Tyr Ala Ala Thr Val Ala Thr Ala Pro Ala Val Lys Tyr
245 250 255

Thr Val Phe Glu Thr Ala Leu Lys Lys Ala Ile Thr Ala Met Ser Gln
260 265 270

Ala Gln Lys Ala Ala Lys Pro Ala Ala Ala Ala Thr Gly Thr Ala Thr
275 280 285

Ala Ala Val Gly Ala Ala Thr Gly Ala Ala Thr Ala Ala Ala Gly Gly
290 295 300

Tyr Lys Val
305

<210> 118
<211> 333
<212> PRT
<213> Poa pratensis

<400> 118

Met Ala Val His Gln Tyr Thr Val Ala Leu Phe Leu Ala Val Ala Leu
1 5 10 15

Val Ala Gly Pro Ala Ala Ser Tyr Ala Ala Asp Val Gly Tyr Gly Ala
20 25 30

[illegible]

His Gln Lys Leu His His Lys Leu Asn Ala Gly Leu Lys Ala Ala Val
65 70 75 80

85 90 95

Ala Thr Phe Gly Thr Ala Ser Asn Lys Ala Phe Ala Glu Ala Leu Ser
100 105 110

Thr Glu Pro Lys Gly Ala Ala Ala Ala Ser Ser Asn Ala Val Leu Thr
115 120 125

Ser Lys Leu Asp Ala Ala Tyr Lys Leu Ala Tyr Lys Ser Ala Glu Gly
130 135 140

Ala Thr Pro Glu Ala Lys Tyr Asp Ala Tyr Val Ala Thr Leu Ser Glu
145 150 155 160

Ala Leu Arg Ile Ile Ala Gly Thr Leu Glu Val His Ala Val Lys Pro
165 170 175

Ala Gly Glu Glu Val Lys Ala Ile Pro Ala Gly Glu Leu Gln Val Ile
180 185 190

Asp Lys Val Asp Ala Ala Phe Lys Val Ala Ala Thr Ala Ala Asn Ala
195 200 205

Ala Pro Ala Asn Asp Lys Phe Thr Val Phe Glu Ala Ala Phe Asn Asp
210 215 220

Ala Ile Lys Ala Ser Thr Gly Gly Ala Tyr Gln Ser Tyr Lys Phe Ile
225 230 235 240

Pro Ala Leu Glu Ala Ala Val Lys Gln Ser Tyr Ala Ala Thr Val Ala
245 250 255

Thr Ala Pro Ala Val Lys Tyr Thr Val Phe Glu Thr Ala Leu Lys Lys
260 265 270

Ala Ile Thr Ala Met Ser Gln Ala Gln Lys Ala Ala Lys Pro Ala Ala
275 280 285

Ala Val Thr Ala Thr Ala Thr Gly Ala Val Gly Ala Ala Thr Gly Ala
290 295 300

Val Gly Ala Ala Thr Gly Ala Ala Thr Ala Ala Ala Gly Gly Tyr Lys
305 310 315 320

Thr Gly Ala Ala Thr Pro Thr Ala Gly Gly Tyr Lys Val
325 330

<210> 119
<211> 373
<212> PRT
<213> Poa pratensis

Ala Val Ala [illegible] Ala Pro Lys Thr Pr Val Phe Glu Ala Thr Leu Asp
20 25 30

35 40 45

Lys Lys Leu Asp Ala Phe Ile Gln Thr Ser Tyr Leu Ser Thr Lys Ala
50 55 60

Ala Glu Pro Lys Glu Lys Phe Asp Leu Phe Val Leu Ser Leu Thr Glu
65 70 75 80

Val Leu Arg Phe Met Ala Gly Ala Val Lys Ala Pro Pro Ala Ser Lys
85 90 95

Phe Pro Ala Lys Pro Ala Pro Lys Val Ala Ala Tyr Thr Pro Ala Ala
100 105 110

Pro Ala Gly Ala Ala Pro Lys Ala Thr Thr Asp Glu Gln Lys Leu Ile
115 120 125

Glu Lys Ile Asn Val Gly Phe Lys Ala Ala Val Ala Ala Ala Ala Gly
130 135 140

Val Pro Ala Ala Ser Lys Tyr Lys Thr Phe Val Ala Thr Phe Gly Ala
145 150 155 160

Ala Ser Asn Lys Ala Phe Ala Glu Ala Leu Ser Thr Glu Pro Lys Gly
165 170 175

Ala Ala Val Ala Ser Ser Lys Ala Val Leu Thr Ser Lys Leu Asp Ala
180 185 190

Ala Tyr Lys Leu Ala Tyr Lys Ser Ala Glu Gly Ala Thr Pro Glu Ala
195 200 205

Lys Tyr Asp Ala Tyr Val Ala Thr Leu Ser Glu Ala Leu Arg Ile Ile
210 215 220

Ala Gly Thr Leu Glu Val His Gly Val Lys Pro Ala Ala Glu Glu Val
225 230 235 240

Lys Ala Ile Pro Ala Gly Glu Leu Gln Val Ile Asp Lys Val Asp Ala
245 250 255

Ala Phe Lys Val Ala Ala Thr Ala Ala Asn Ala Ala Pro Ala Asn Asp
260 265 270

Lys Phe Thr Val Phe Glu Ala Ala Phe Asn Asp Ala Ile Lys Ala Ser
275 280 285

Thr Gly Gly Ala Tyr Gln Ser Tyr Lys Phe Ile Pro Ala Leu Glu Ala
290 295 300

Ala Val Lys Gln Ser Tyr Ala Ala Thr Val Ala Thr Ala Pro Ala Val

[illegible]

Gly Gly Tyr Lys Val
370

<210> 120
<211> 685
<212> PRT
<213> Periplaneta americana

<400> 120

Met Lys Thr Ala Leu Val Phe Ala Ala Val Val Ala Phe Val Ala Ala
1 5 10 15

Arg Phe Pro Asp His Lys Asp Tyr Lys Gln Leu Ala Asp Lys Gln Phe
20 25 30

Leu Ala Lys Gln Arg Asp Val Leu Arg Leu Phe His Arg Val His Gln
35 40 45

His Asn Ile Leu Asn Asp Gln Val Glu Val Gly Ile Pro Met Thr Ser
50 55 60

Lys Gln Thr Ser Ala Thr Thr Val Pro Pro Ser Gly Glu Ala Val His
65 70 75 80

Gly Val Leu Gln Glu Gly His Ala Arg Pro Arg Gly Glu Pro Phe Ser
85 90 95

Val Asn Tyr Glu Lys His Arg Glu Gln Ala Ile Met Leu Tyr Asp Leu
100 105 110

Leu Tyr Phe Ala Asn Asp Tyr Asp Thr Phe Tyr Lys Thr Ala Cys Trp
115 120 125

Ala Arg Asp Arg Val Asn Glu Gly Met Phe Met Tyr Ser Phe Ser Ile
130 135 140

Ala Val Phe His Arg Asp Asp Met Gln Gly Val Met Leu Pro Pro Pro
145 150 155 160

Tyr Glu Val Tyr Pro Tyr Leu Phe Val Asp His Asp Val Ile His Met
165 170 175

Ala Gln Lys Tyr Trp Met Lys Asn Ala Gly Ser Gly Glu His His Ser
180 185 190

His Val Ile Pro Val Asn Phe Thr Leu Arg Thr Gln Asp His Leu Leu
195 200 205

Ala Tyr Phe Thr Ser Asp Val Asn Leu Asn Ala Phe Asn Thr Tyr Tyr

[illegible]

Pro Phe Tyr Tyr Ser Lys Pro Val Lys Ser Ala Tyr Asn Pro Asn Leu
275 280 285

Arg Tyr His Asn Gly Glu Glu Met Pro Val Arg Pro Ser Asn Met Tyr
290 295 300

Val Thr Asn Phe Asp Leu Tyr Tyr Ile Ala Asp Ile Lys Asn Tyr Glu
305 310 315 320

Lys Arg Val Glu Asp Ala Ile Asp Phe Gly Tyr Ala Phe Asp Glu His
325 330 335

Met Lys Pro His Ser Leu Tyr His Asp Val His Gly Met Glu Tyr Leu
340 345 350

Ala Asp Met Ile Glu Gly Asn Met Asp Ser Pro Asn Phe Tyr Phe Tyr
355 360 365

Gly Ser Ile Tyr His Met Tyr His Ser Met Ile Gly His Ile Val Asp
370 375 380

Pro Tyr His Lys Met Gly Leu Ala Pro Ser Leu Glu His Pro Glu Thr
385 390 395 400

Val Leu Arg Asp Pro Val Phe Tyr Gln Leu Trp Lys Arg Val Asp His
405 410 415

Leu Phe Gln Lys Tyr Lys Asn Arg Leu Pro Arg Tyr Thr His Asp Glu
420 425 430

Leu Ala Phe Glu Gly Val Lys Val Glu Asn Val Asp Val Gly Lys Leu
435 440 445

Tyr Thr Tyr Phe Glu Gln Tyr Asp Met Ser Leu Asp Met Ala Val Tyr
450 455 460

Val Asn Asn Val Asp Gln Ile Ser Asn Val Asp Val Gln Leu Ala Val
465 470 475 480

Arg Leu Asn His Lys Pro Phe Thr Tyr Asn Ile Glu Val Ser Ser Asp
485 490 495

Lys Ala Gln Asp Val Tyr Val Ala Val Phe Leu Gly Pro Lys Tyr Asp
500 505 510

Tyr Leu Gly Arg Glu Tyr Asp Leu Asn Asp Arg Arg His Tyr Phe Val
515 520 525

Glu Met Asp Arg Phe Pro Tyr His Val Gly Ala Gly Lys Thr Val Ile
530 535 540

Gln Tyr Tyr Val Asp Lys Gly His Asn Tyr Cys Gly Tyr Pro Glu Asn

Leu Leu Ile Pro Lys Gly Lys Lys Gly Gly Gln Ala Tyr Thr Phe Tyr
595 600 605

Val Ile Val Thr Pro Tyr Val Lys Gln Asp Glu His Asp Phe Glu Pro
610 615 620

Tyr Asn Tyr Lys Ala Phe Ser Tyr Cys Gly Val Gly Ser Glu Arg Lys
625 630 635 640

Tyr Pro Asp Asn Lys Pro Leu Gly Tyr Pro Phe Asp Arg Lys Ile Tyr
645 650 655

Ser Asn Asp Phe Tyr Thr Pro Asn Met Tyr Phe Lys Asp Val Ile Ile
660 665 670

Phe His Lys Lys Tyr Asp Glu Val Gly Val Gln Gly His
675 680 685

<210> 121
<211> 446
<212> PRT
<213> Periplaneta americana

<400> 121

Ile Asn Glu Ile His Ser Ile Ile Gly Leu Pro Pro Phe Val Pro Pro
1 5 10 15

Ser Arg Arg His Ala Arg Arg Gly Val Gly Ile Asn Gly Leu Ile Asp
20 25 30

Asp Val Ile Ala Ile Leu Pro Val Asp Glu Leu Lys Ala Leu Phe Gln
35 40 45

Glu Lys Leu Glu Thr Ser Pro Asp Phe Lys Ala Leu Tyr Asp Ala Ile
50 55 60

Arg Ser Pro Glu Phe Gln Ser Ile Ile Ser Thr Leu Asn Ala Met Gln
65 70 75 80

Arg Ser Glu His His Gln Asn Leu Arg Asp Lys Gly Val Asp Val Asp
85 90 95

His Phe Ile Gln Leu Ile Arg Ala Leu Phe Gly Leu Ser Arg Ala Ala
100 105 110

Arg Asn Leu Gln Asp Asp Leu Asn Asp Phe Leu His Ser Leu Glu Pro
115 120 125

Ile Ser Pro Arg His Arg His Gly Leu Pro Arg Gln Arg Arg Arg Ser
130 135 140

Lys Glu His Gly Leu Asp Val Val Asp Tyr Ile Asn Glu Ile His Ser

Ile Ile Gly Leu Pro Pro Phe Val Pro Pro Ser Arg Arg His Ala Arg
195 200 205

Arg Gly Val Gly Ile Asn Gly Leu Ile Asp Asp Val Ile Ala Ile Leu
210 215 220

Pro Val Asp Glu Leu Lys Ala Leu Phe Gln Glu Lys Leu Glu Thr Ser
225 230 235 240

Pro Asp Phe Lys Ala Leu Tyr Asp Ala Ile Arg Ser Pro Glu Phe Gln
245 250 255

Ser Ile Ile Ser Thr Leu Asn Ala Met Pro Glu Tyr Gln Glu Leu Leu
260 265 270

Gln Asn Leu Arg Asp Lys Gly Val Asp Val Asp His Phe Ile Arg Val
275 280 285

Asp Gln Gly Thr Leu Arg Thr Leu Ser Ser Gly Gln Arg Asn Leu Gln
290 295 300

Asp Asp Leu Asn Asp Phe Leu Ala Leu Ile Pro Thr Asp Gln Ile Leu
305 310 315 320

Ala Ile Ala Met Asp Tyr Leu Ala Asn Asp Ala Glu Val Gln Glu Leu
325 330 335

Val Ala Tyr Leu Gln Ser Asp Asp Phe His Lys Ile Ile Thr Thr Ile
340 345 350

Glu Ala Leu Pro Glu Phe Ala Asn Phe Tyr Asn Phe Leu Lys Glu His
355 360 365

Gly Leu Asp Val Val Asp Tyr Ile Asn Glu Ile His Ser Ile Ile Gly
370 375 380

Leu Pro Pro Phe Val Pro Pro Ser Gln Arg His Ala Arg Arg Gly Val
385 390 395 400

Gly Ile Asn Gly Leu Ile Asp Asp Val Ile Ala Ile Leu Pro Val Asp
405 410 415

Glu Leu Lys Ala Leu Phe Gln Glu Lys Leu Glu Thr Ser Pro Asp Phe
420 425 430

Lys Ala Leu Tyr Asp Ala Ile Asp Leu Arg Ser Ser Arg Ala
435 440 445

<210> 122
<211> 352
<212> PRT

Thr His Ala Ala Glu Leu Gln Arg Val Pro Leu Tyr Lys Leu Val His

Val Phe Ile Asn Thr Gln Tyr Ala Gly Ile Thr Lys Ile Gly Asn Gln
35 40 45

Asn Phe Leu Thr Val Phe Asp Ser Thr Ser Cys Asn Val Val Val Ala
50 55 60

Ser Gln Glu Cys Val Gly Gly Ala Cys Val Cys Pro Asn Leu Gln Lys
65 70 75 80

Tyr Glu Lys Leu Lys Pro Lys Tyr Ile Ser Asp Gly Asn Val Gln Val
85 90 95

Lys Phe Phe Asp Thr Gly Ser Ala Val Gly Arg Gly Ile Glu Asp Ser
100 105 110

Leu Thr Ile Ser Asn Leu Thr Thr Ser Gln Gln Asp Ile Val Leu Ala
115 120 125

Asp Glu Leu Ser Gln Glu Val Cys Ile Leu Ser Ala Asp Val Val Val
130 135 140

Gly Ile Ala Ala Pro Gly Cys Pro Asn Ala Leu Lys Gly Lys Thr Val
145 150 155 160

Leu Glu Asn Phe Val Glu Glu Asn Leu Ile Ala Pro Val Phe Ser Ile
165 170 175

His His Ala Arg Phe Gln Asp Gly Glu His Phe Gly Glu Ile Ile Phe
180 185 190

Gly Gly Ser Asp Trp Lys Tyr Val Asp Gly Glu Phe Thr Tyr Val Pro
195 200 205

Leu Val Gly Asp Asp Ser Trp Lys Phe Arg Leu Asp Gly Val Lys Ile
210 215 220

Gly Asp Thr Thr Val Ala Pro Ala Gly Thr Gln Ala Ile Ile Asp Thr
225 230 235 240

Ser Lys Ala Ile Ile Val Gly Pro Lys Ala Tyr Val Asn Pro Ile Asn
245 250 255

Glu Ala Ile Gly Cys Val Val Glu Lys Thr Thr Thr Arg Arg Ile Cys
260 265 270

Lys Leu Asp Cys Ser Lys Ile Pro Ser Leu Pro Asp Val Thr Phe Val
275 280 285

Ile Asn Gly Arg Asn Phe Asn Ile Ser Ser Gln Tyr Tyr Ile Gln Gln
290 295 300

Asn Trp Gly Asn Lys Thr Met Gly Ile Gly Ala Ser Val Arg Ser Val
340 345 350

<211> 182
<212> PRT
<213> Blattella germanica

<400> 123

Ala Val Leu Ala Leu Cys Ala Thr Asp Thr Leu Ala Asn Glu Asp Cys
1 5 10 15

Phe Arg His Glu Ser Leu Val Pro Asn Leu Asp Tyr Glu Arg Phe Arg
20 25 30

Gly Ser Trp Ile Ile Ala Ala Gly Thr Ser Glu Ala Leu Thr Gln Tyr
35 40 45

Lys Cys Trp Ile Asp Arg Phe Ser Tyr Asp Asp Ala Leu Val Ser Lys
50 55 60

Tyr Thr Asp Ser Gln Gly Lys Asn Arg Thr Thr Ile Arg Gly Arg Thr
65 70 75 80

Lys Phe Glu Gly Asn Lys Phe Thr Ile Asp Tyr Asn Asp Lys Gly Lys
85 90 95

Ala Phe Ser Ala Pro Tyr Ser Val Leu Ala Thr Asp Tyr Glu Asn Tyr
100 105 110

Ala Ile Val Glu Gly Cys Pro Ala Ala Ala Asn Gly His Val Ile Tyr
115 120 125

Val Gln Ile Arg Phe Ser Val Arg Arg Phe His Pro Lys Leu Gly Asp
130 135 140

Lys Glu Met Ile Gln His Tyr Thr Leu Asp Gln Val Asn Gln His Lys
145 150 155 160

Lys Ala Ile Glu Glu Asp Leu Lys His Phe Asn Leu Lys Tyr Glu Asp
165 170 175

Leu His Ser Thr Cys His
180

<210> 124
<211> 200
<212> PRT
<213> Blattella germanica

<400> 124

Tyr Lys Leu Thr Tyr Cys Pro Val Lys Ala Leu Gly Glu Pro Ile Arg
1 5 10 15

Pro Val Leu Glu Ile Asp Gly Lys Gln Thr His Gln Ser Val Ala Ile

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Ser Arg Tyr Leu Gly Lys Gln Phe Gly Leu Ser Gly Lys Asp Asp Trp
65                  70                  75                  80

Glu Asn Leu Glu Ile Asp Met Ile Val Asp Thr Ile Ser Asp Phe Arg
                85                  90                  95

Ala Ala Ile Ala Asn Tyr His Tyr Asp Ala Asp Glu Asn Ser Lys Gln
            100                 105                 110

Lys Lys Trp Asp Pro Leu Lys Lys Glu Thr Ile Pro Tyr Tyr Thr Lys
        115                 120                 125

Lys Phe Asp Glu Val Val Lys Ala Asn Gly Gly Tyr Leu Ala Ala Gly
    130                 135                 140

Lys Leu Thr Trp Ala Asp Phe Tyr Phe Val Ala Ile Leu Asp Tyr Leu
145                 150                 155                 160

Asn His Met Ala Lys Glu Asp Leu Val Ala Asn Gln Pro Asn Leu Lys
                165                 170                 175

Ala Leu Arg Glu Lys Val Leu Gly Leu Pro Ala Ile Lys Ala Trp Val
            180                 185                 190

Ala Lys Arg Pro Pro Thr Asp Leu
        195                 200
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